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BANKS, INTERMEDIARIES AND MONETARY POLICY

by

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ABSTRACT

Since World War II, an increasing number of articles concerning the effectiveness of monetary policy has appeared in various economic journals. Exponents of the traditional view have tended to argue that the present techniques of monetary control are capable of adequately controlling the money supply and the creation of credit in the economy. Other authors, however, have argued that monetary policy is no longer adequate. They argue that structural changes in the financial sector of the economy allow a more intensive utilization of the existing money supply during periods of monetary restraint.

The primary purpose of this work is to survey and analyse the controversy concerning the effectiveness of monetary policy. To achieve this aim particular emphasis is centered upon: (1) the mechanism by which the Federal Reserve System influences the flow of money and credit; (2) the structure of the credit market; (3) the decline of the commercial banking system relative to financial intermediaries; and, (4) the phenomenal growth of liquid assets in the American economy. These various factors are discussed in an attempt to determine whether structural changes in the financial sector of the economy since World War II have undermined the effectiveness of the Federal Reserve monetary policy, i.e. to determine whether a restrictive monetary policy can prevent financial institutions, including the commercial banking system, from mobilizing funds in support of economic activity.

Currently the controversy has moderated. The protagonists have absorbed each other's criticism; they have weighed the effect of structural changes in the economy, and each has accepted a less extreme position. In effect, the controversy has been reduced to the point where further statistical evidence is required before the effectiveness of monetary policy can be adjudged.

CHAPTER I

INTRODUCTION

A. A Statement of the Controversy

The effect of monetary policy on the commercial banking system in particular, and upon financial intermediaries in general, has been the subject of considerable controversy during the past fifty years. The controversy has been especially keen during the past three decades. Consequently we have witnessed tremendous extremes of thought concerning the ability of the monetary authority to achieve results from contra-cyclical credit and monetary policy. We have witnessed first a sweeping revolution against previously accepted economic doctrine and then a counter-revolution which is still being fought but which is likely to be no less sweeping.[1] Since World War II, according to L. V. Chandler, the controversy has become one of the most heated in American monetary history.[2]

The empirical findings which indicate that commercial banks have declined in economic importance relative to other financial institutions since 1900 have called forth a number of articles by various

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[1] See Milton Friedman, A Program for Monetary Stability (New York: Fordham University Press, 1960), pp. 1-2.

[2] See Lester V. Chandler, The Economics of Money and Banking (rev. ed.; New York: Harper and Brothers, 1953), p. 380.

economists, one of the foremost being the article entitled "Financial Aspects of Economic Development," by J. G. Gurley and E. S. Shaw.[3] It is the view of these economists that:

> . . . the innovation and growth of other financial intermediaries have greatly diversified the channels through which loanable funds can flow, the types of financial assets that surplus units may acquire, and the markets on which deficit spending units may sell direct securities.[4]
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> . . . . . .
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> We are deviating from conventional doctrine in regarding the banking system as one among many financial intermediaries. . . . We take exception to the view that banks stand apart in their ability to create loanable funds. . . .[5]

Thus, the evidence of a relative decline in the importance of commercial banking in addition to the belief that monetary controls are confined to commercial banks, has led to controversial conclusions regarding the potency of monetary policy. Joseph Aschheim is of the opinion that the following far-reaching policy conclusions are now gaining favourable attention. First, monetary policy has been seriously weakened by the relative growth of intermediaries that have remained free from the controls imposed on commercial banks. Second, and a corollary of the first, monetary policy has been substantially curtailed by being confined to commercial banks, and as a result, new controls to encompass the operations of intermediaries are needed. Finally, monetary policy may weaken the ability of the commercial banking system to attract enough capital to contribute significantly to the risky ventures required for future economic growth. It is Aschheim's belief that

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[3] J. G. Gurley and E. S. Shaw, "Financial Aspects of Economic Development," American Economic Review, XLV (September, 1955), 515-38.

[4] Ibid., p. 520.

[5] Ibid., p. 521.

these topics, or some aspect of them, have formed the main basis for the various discussions occurring in the economic literature.[6]

As a result of developments in economic thought--in particular an analysis of the ideas of John Maynard Keynes--and as a result of the brute force of events, a rebirth of interest has occurred causing economists to take the first "provocative step in the transition to theorizing about financial control as distinct from monetary control."[7] The discussion in general terms has been centered on three aspects of the debate:

1. The phenomenal growth in liquidity following World War II and the resulting effect on the financial sector have caused many economists to question the ability of the monetary authority to control the supply of money and the creation of credit in the economy.

2. As a result of the growth of financial intermediaries, the relative decline of commercial banking, and the various structural changes which have taken place in the economy, many economists feel that the ability of the monetary authority to control the money supply with the current tools of monetary policy has been seriously hampered.

3. Other writers are concerned with whether or not the traditional methods of monetary policy have become archaic. They suggest how the various tools of monetary policy can be revitalized and strengthened, and some even suggest that the sphere of monetary policy be expanded to include direct control over the financial sector.

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[6] Joseph Aschheim, "Commercial Banks and Financial Intermediaries:Fallacies and Policy Implications," Journal of Political Economy, LXVII (February, 1959), 67.

[7] Gurley and Shaw, op. cit., p. 538.

It is evident, therefore, that these three aspects of the controversy are interdependent. The growth of liquidity following World War II resulted in the growth of financial intermediaries which, in turn, spawned the controversy concerning the potency of traditional monetary policy.

B. The Object of the Thesis

When credit conditions are tightened by the monetary authority and the creation of new money through the banking system is restricted, recent articles have suggested that the financial machinery of the country automatically begins to work in such a manner as to mobilize the existing supply of money in the economy more effectively.[8] This view is directly attributable to the tremendous growth in liquid assets and to the growing importance of financial intermediaries in the financial sector since World War II. However, exponents of the traditional view tend to argue for the retention of the present monetary techniques. They are of the opinion that the commercial banking system, and consequently the money supply, is being adequately controlled by existing monetary policies, and as a result, that financial intermediaries are also being controlled.

The traditional view is aptly expressed by a publication of the Board of Governors of the Federal Reserve System, entitled, The Federal Reserve System:Purposes and Functions, which states:

> Changes in credit conditions brought about by monetary policy affect the various types of lenders in credit markets in diverse ways. Some of these lenders, such as finance

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[8] See, for example, W. L. Smith, "On the Effectiveness of Monetary Policy," American Economic Review, XLVI (September, 1956), 601.

> companies and mortgage companies, obtain part of their funds by borrowing from commercial banks. Funds from this source will be less readily available and more expensive in times of credit restraint than in times of credit ease. As the volume of their borrowing is restricted and its cost rises, nonbank lenders may find it necessary to curtail their lending.[9] They will also tend to charge their customers higher rates of interest on loans or to seek investments with higher yields.[10]

The object of the thesis will be to survey and to analyse the literature in an attempt to determine if traditional monetary policy can ensure sufficient control of bank and intermediary credit given the relative decline in importance of the commercial banking system and the phenomenal growth of liquid assets in the financial sector of the economy. The approach will be to pose the following questions:

1. What is the structure of the financial sector?

2. What are the traditional techniques of monetary control and have they enabled the Federal Reserve System to control the money supply and the creation of credit in the economy?

3. Have structural changes in the financial market, for example, the growth of financial intermediaries, undermined the effectiveness of traditional monetary controls?

4. What is the consequence of the "effectiveness argument" insofar as monetary policy is concerned?

In seeking answers to these questions the Federal Reserve System of the United States of America will be the monetary authority under consideration.

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[9]Note the emphasis placed upon the availability of credit as opposed to the neoclassical concentration upon the interest cost of additional credit.

[10]The Board of Governors of the Federal Reserve System, The Federal Reserve System: Purposes and Functions (Washington: The Board of Governors of the Federal Reserve System, 1961), p. 139; hereinafter referred to as Purposes and Functions.

C. Method of Approach

The questions asked above are answered in the text, each answer constituting a different chapter. Thus, Chapter II discusses the structure of the financial sector. Chapter III discusses the traditional techniques of control and the history of their use in the United States. Chapter IV discusses the growth of financial intermediaries since World War II, and Chapter V considers the effectiveness of monetary policy from the various different points of view. Chapter VI considers the questions raised in the literature of the controversy and discussed in this paper, with the aim being to determine the present state of the controversy.

CHAPTER II

THE STRUCTURE OF THE FINANCIAL SECTOR

This chapter will discuss the major financial institutions that together form the financial sector of the economy. The commercial banking system, being the dominant institution and the major source of the money supply, is discussed first. The various financial intermediaries are discussed next under the broad categories of, savings institutions, borrowing institutions, and Federal Government financial institutions.

A. The Commercial Banking System Under the Federal Reserve

The striking feature of the American commercial banking system is the large number of individual banks that it contains. There were 13,437 commercial banks in the United States on December, 1961, of which 6,174 were members of the Federal Reserve System.[1] Of the member banks, there were 4,530 national banks and 1,644 state-chartered banks. The national banks are required to belong to the Federal Reserve System but state banks are permitted to join only if they are qualified for membership and acceptable to the Federal Reserve. Although slightly less than one-half of all the commercial banks belong to the Federal Reserve System, nearly three-fourths of the country's bank deposits are held by

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[1] The Board of Governors of the Federal Reserve System, Federal Reserve Bulletin (Washington: The Board of Governors of the Federal Reserve System, April, 1962), pp. 427-29.

them. Moreover, the member banks hold about 85% of the demand deposits of all banks, which, along with currency is usually defined as the money supply in the economy. "Consequently, Federal Reserve policies have a direct influence on institutions holding nearly nine-tenths of the bank deposits that constitute the major components of the country's active money supply."[2]

Single office banks predominate in the United States, although 2,484 commercial banks maintained 11,072 branches and additional offices as of December, 1961. Therefore, the American banking system is far from being homogeneous. It contains: (a) independent unit banks, (b) branch banks, and (c) chain and group banks.[3]

Commercial banks to make profits must put the money they receive as capital and deposits into loans and security holdings. In most States, however, the banks "are required by law to hold as reserve assets an amount of uninvested funds equal to a designated portion of their deposits."[4] Member banks in the Federal Reserve System are required to keep reserves in the form of vault cash[5] and demand deposits held with the Federal Reserve Banks, in the following percentages: (a) Central Reserve City Banks[6] - 16½%, (b) Reserve City Banks - 16½%, (c) Country Banks - 12%.

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[2]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 64.

[3]W. H. Steiner, Eli Shapiro, and Ezra Solomon, Money and Banking (4th ed.; New York: Henry Holt & Co., 1958), p. 86.

[4]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 13.

[5]Effective November 24, 1960, member banks are allowed to count all vault cash as reserves.

[6]Under the 1959 Amendment to the Federal Reserve Act, this category was abolished in 1962. See, The Board of Governors of the Federal

The Federal Reserve System is a mechanism especially adapted to a banking system with many independent units distributed over a large geographical area. The System is divided into twelve districts, with a Federal Reserve Bank in each district. Federal Reserve Banks are privately owned corporations but are operated in the public service and "profits are not the object of their operation."[7] In each Federal Reserve Bank there are nine directors who appoint a President and First Vice-President on the approval of the Board of Governors of the Federal Reserve System. The Board of Governors consists of seven members appointed by the President and confirmed by the Senate of the United States, with terms of fourteen years, one member being replaced each two years. The Board has extensive authority over the important monetary actions of the Federal Reserve:

1. It has full authority over changes in reserve requirements.

2. It has complete authority to review and determine the discount rates established by the directors of the Federal Reserve Banks.

3. It constitutes a majority of the members on the Federal Reserve Open Market Committee which sets open-market policy.

4. It is completely responsible for determining selective regulations in the stock market.

5. It establishes the maximum rate of interest payable by member banks on savings and time deposits.

Reserve System, Purposes and Functions, op. cit., f.n., p. 14. The category is included here because the statistical data is taken as being effective March 1, 1962.

[7] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 69.

6. It is generally responsible for formulating national monetary policy and for supervising its execution.[8]

The organization of the Federal Reserve System is rather complex. The 12 Federal Reserve Banks, operating 24 branches, have 9 directors each. There are 3 class A directors representing the banking community, three class B directors representing the business community, and three class C directors representing the banking public.

The seven members of the System's Board of Governors, appointed by the President of the United States and confirmed by the Senate, are responsible for appointing the 3 class C directors. In addition, the Board is responsible for the approval of the appointment and salary of the President and First Vice-President of each Federal Reserve Bank as well as for the salary of the other officers and employees in each Feeral Reserve Bank. Each of the 7 members of the Board of Governors is also on the Federal Open Market Committee, in which organization they form a majority. The directors of the 12 Federal Reserve Banks select the other 5 members of the Open Market Committee and also select one council member each to serve on the 12 man Federal Advisory Council.

B. Financial Intermediaries

Financial intermediaries are a class of financial institution distinct from the commercial banks. In general, the distinction between them follows from two considerations. First, commercial banks create money assets for their deposit customers, whereas financial intermediaries create non-monetary, though highly liquid, assets. Second, the commercial banks as a system are capable of multiple credit creation

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[8] Ibid., p. 75.

on the basis of net cash inflows from depositors, whereas financial intermediaries as a group can normally lend no more than they receive from their depositors. Hence, the commercial banking system may be described as a creator of loanable funds (credit), while financial intermediaries are no more than brokers of loanable funds, serving the important function of linking savings flows with investment demands.

In 1958, there were more than 50,000 financial businesses in the United States,[9] most of them fulfilling a financial intermediary's function. They obtain funds by issuing liquid claims against themselves, then use the funds so obtained to purchase financial assets (primary securities) from the nonfinancial sector of the economy. "Financial intermediaries held about $500 billion of such assets in 1958, including two-thirds of the indebtedness of the nonfinancial sector of the economy."[10] The volume of transactions handled by financial intermediaries is also enormous. According to Paul Trescott, it was in excess of $1.5 trillion in 1958.

1. Savings Institutions

Mutual savings banks, savings and loan associations, and credit unions are the primary private savings institutions. Although they cannot create money, they are capable of creating near money liquid assets in the form of savings deposits or shares. In 1958, these institutions had $86 billion in claims outstanding.

Savings institutions obtain virtually all their funds from savings deposits or shares of a fixed-value, interest-bearing form. They

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[9] Paul B. Trescott, Money, Banking, and Economic Welfare (New York: McGraw-Hill, 1960), p. 239. This section owes much to the work by Trescott, especially pp. 239-99.

[10] Ibid., p. 240.

are mostly non-profit mutual institutions, owned by their depositors, with each confining itself to a limited range of assets. Credit unions concentrate on personal loans to their shareholders, whereas mutual savings banks and savings and loan associations stress residential mortgage loans.[11]

Other major financial institutions accumulate large sums of savings in the performance of a specific service or function. For this reason, insurance companies and pension funds are also included under the general category of Savings Institutions. Their primary function is to protect the policyholder and his dependents against unforeseen contingencies. However, the savings feature, induced by charging a level-premium payment on most policies, results in the accumulation of a large volume of investable funds. Because of this, these firms constitute a large and a growing segment of the capital market.

(a) Mutual Savings Banks.--These institutions were established initially as philanthropic agencies, to provide a protected savings outlet for low income families. There were 513 mutual savings banks in 1962, with more than 300 in New York and Massachusetts, the remainder being located mainly in other New England states.[12] These banks tend to be large, with assets averaging in excess of $70 million each. Approximately one half of them, with 80 per cent of the total assets, have deposit insurance with the Federal Deposit Insurance Corporation.[13] They generally confine their investment activities to residential

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[11] Ibid., p. 277.

[12] The Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, op. cit., p. 427.

[13] See below, p. 19.

mortgages and loans. In early 1962, nearly $29 billion in mortgage loans were held.[14]

(b) Savings and Loan Associations.--This type of institution began originally as a cooperative through which members could save funds to buy homes and borrow to obtain home-mortgage money. The savings and loan associations have shown little growth in numbers since World War II, although aggressive competition and high interest offerings have tended to cause a rapid increase in their asset holdings. At present, about 6,000 institutions hold total assets of approximately $82 billion, with about $70 billion held in mortgages.[15] The associations can apply for share insurance under the Federal Savings and Loan Insurance Corporation but only about one half are insured; however, that half holds 90 per cent of the total assets.

(c) Credit Unions.--These institutions were organized primarily to assist low-income industrial families. Essentially, they are a type of cooperative formed by people who have been brought together as a result of being employed at the same place or by being members of the same church, trade-union or fraternal group.[16] The members make deposits and thereby build up a fund from which loans at relatively low interest rates can be made to members. In 1958, there were over 19,000 credit unions holding assets of approximately $350 million dollars.[17]

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[14] Ibid., p. 438.
[15] Ibid., p. 439.
[16] Trescott, op. cit., p. 278.
[17] See tables I and II.

(d) Insurance Companies.--The primary purpose of this type of institution is not investment; but to provide protection against risk. Insurance companies insure both life and property and in the performance of these functions large sums of money are collected. This results in the establishment of huge investment funds.

Non-life insurance premiums, "are the sum of the mathematical expectation of loss for each policyholder plus his share of operating costs."[18] Except for the relatively small amount collected as a contingency reserve, small amounts are available for investment from non-life insurance companies. However, life insurance premiums, except for term insurance, involve a large saving element--a principle not inherent in the function of insurance. This element of saving is most pronounced in endowment or limited payment policies. In effect, under a level-premium policy, the policyholder saves in his early years to meet the increased cost of insuring his life when he grows older. It is largely because of this accumulation of a reserve of cash value at the outset of the policy that insurance companies are provided with such a huge volume of investable funds. The savings feature is evident since the policyholder is able to borrow on the policy or to withdraw a portion of the accumulated payments if he wishes to cancel the policy.

In early 1962, life insurance companies in the United States held total assets of approximately $127 billion. Mortgage holdings accounted for about $44 billion, business securities about $54 billion, government securities about $12 billion and the remainder was made up

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[18] Ibid., p. 279.

of real estate, policy loans and other assets.[19] Mortgages and corporate bonds together accounted for about 75 per cent of the total assets of life insurance companies in 1962. This is largely the result of government regulations imposed upon the insurance industry which stress safety of principal and stability of income in investment undertakings.

The life insurance industry is highly concentrated. Out of almost 1300 companies in 1958, the ten largest handled 60 per cent of all business.[20] This allows the large firms to diversify widely and to protect themselves against loss.

(e) Pension Funds.--This sector of the financial market has shown rapid recent growth, largely because of union demands for employee pension schemes. Late in 1958, about nineteen million people in the United States were covered by insured and non-insured plans. The assets of the insured pension funds are included in the life insurance sector, but approximately $20 billion in assets, mainly in corporate bonds and stocks, were held by the non-insured funds during the same period.

The function of a pension fund is similar to an insurance policy; however, it tends to be a mirror image, in that the pension fund protects the individual and his dependents against the consequences of a long life rather than an early death.

2. Borrowing Institutions

These institutions specialize in tapping the savings market by borrowing from savings institutions or other specialized institutions

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[19] The Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, op. cit., p. 439.

[20] Prescott, op. cit., p. 284.

where savings are accumulated. Borrowing intermediaries do not obtain funds directly from the saving public because they do not offer the average saver a specific service or function. Instead, they specialize in creating a mechanism whereby funds can be obtained from various savings agencies. These funds are then distributed to borrowers in specific segments of the economy for a specific purpose. Thus, the sales finance and personal loan companies obtain funds for consumer borrowing; mortgage companies raise funds for new construction; and investment banks obtain funds for corporations.

(a) Investment Banks.--This type of intermediary originated in the 1920's and has grown rapidly since then. The investment bank's role is basically that of a middleman, with securities being offered by corporations at wholesale and being distributed by the investment bank at retail. These banks vary widely in the type of asset handled. Some investment banks diversify widely, others specialize in stocks, others in bonds, and yet others specialize in the assets of a specific industry or company. The financing of highly respected organizations, like municipalities or public utilities, does not generally require the services of an investment bank. The majority of industrial security issues, however, are underwritten and distributed by this type of intermediary.

Although the need for commercial bank credit is not readily apparent, its use in the distribution of a new security issue is very important. The investment intermediary generally finances the entire issue by means of a commercial bank loan until it is sold. Then, even after purchase has been completed, it is highly probable that the buyer will finance a part of the purchase with bank credit. Because the

distribution of new security issues requires a great deal of credit, these institutions are very sensitive to changes in the availability and cost of commercial bank loans.[21]

(b) Mortgage Companies.--These companies enjoyed wide popularity prior to the 1930's but since that time they have suffered a decline. Their function is similar to that of an investment company in that they are also middlemen. However, in the case of mortgage companies, their clients are seeking geographically diversified mortgage outlets for the accumulated funds that they wish to invest. Mortgage companies are of relatively minor importance in real estate finance, holding only about one billion dollars in assets in 1957.[22]

(c) Sales Finance and Personal Loan Companies.--The sales finance company first became important around 1915 when automobiles began to become popular. Since that time their importance as a source of short-term funds for consumers and businesses has continued to grow. Relatively high unit price durable goods like refrigerators, stoves, and washing machines are the class of item that is financed, generally on an installment payment plan, through this type of intermediary. However, by far the largest number of loans are made for the purchase of new or used automobiles.

The sales finance company protects its claims in two ways, first, by means of a conditional sales agreement in which case the title to the item remains with the finance company until it is paid for. The second way is by means of a chattel mortgage, in which case title passes to the

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[21] Steiner, Shapiro, and Solomon, op. cit., p. 540.

[22] See below Table 2, p. 62.

purchaser but a lien is placed on the item until it is paid for. Therefore, unlike other borrowing intermediaries, the recourse, in case of default, generally remains with the finance company. These companies obtain their funds in three ways; they can sell short-term or long-term debt instruments in the capital market; they can obtain loans from commercial banks or savings institutions; or, they can sell stock to the public and to business. The sale of stock has recently resulted in the growth of the captive finance company--one which is wholly owned and operated as a subsidiary of a nonfinancial firm.[23]

The personal loan company makes small cash loans to its customers. These are generally secured by a co-signer, a chattel, or just the customer's personal credit rating. Its funds are obtained in a manner similar to that of the sales finance company.

3. The Federal Government as a Financial Institution

The Federal Government has progressively increased its participation in the field of finance. At present it is a regulator, a lender, a guarantor, and a manager.

As a regulator, the government through its agencies, principally the Federal Reserve System, exercises both a qualitative and a quantitative control over commercial banks. However, relatively little attention is paid to financial intermediaries or to the cyclical effect of their asset policies.[24]

As a lender, the primary aim of the government is to stimulate agriculture and housing construction, and to provide credit to marginal

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[23]Paul H. Banner, "Competition, Credit Policies, and the Captive Finance Company," Quarterly Journal of Economics, LXXII (May, 1958), 241- 58.

[24]Trescott, op. cit., p. 287.

borrowers. Most of these programs originated during the Great Depression but as of June, 1958, about $16 billion in loans were outstanding from various Federal lending agencies. The tendency has been for the government to sponsor and organize the institution and then to withdraw when support is no longer necessary.

The Federal Government discovered during the 1930's that its purposes could be achieved as effectively as a guarantor or insurer of a loan as by direct government lending. The current use of government loan guarantee is largely in the field of home mortgage credit, under the auspices of the Federal Housing Administration and the Veterans Administration.[25] The primary insurance agencies of the Federal Government are the Federal Deposit Insurance Corporation and the Federal Savings and Loan Insurance Corporation. The first agency insures commercial bank and mutual savings bank deposits up to ten thousand dollars, and covers about 95 per cent of all deposits in insured banks. The latter agency protects all savings and loan share accounts up to ten thousand dollars, with nearly 90 per cent coverage of all shares by dollar volume. Some of the lending and guaranteeing "programs such as deposit insurance and the Farm Credit Administration have received almost unequivocal commendation but most of the others have been controversial."[26]

As a manager, the Federal Government utilizes fiscal policy and the national debt to influence savings, investment, interest rates and other financial conditions. The debt of the Federal Government as of December 31, 1958, was approximately $283 billion, of which commercial

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[25] Ibid., p. 289.
[26] Ibid., p. 291.

banks held approximately $67 billion and other financial institutions about $26 billion.[27] These assets yield some income but also provide a source of ready liquidity for commercial banks. The same is true for financial intermediaries who generally regard their holdings of government securities as interest bearing, near-money, liquid assets that also serve as a type of secondary reserve. Thus, the debt of the Federal Government serves a number of functions. According to Paul Trescott:

> It is a device for financing government trust funds, an instrument of monetary policy, and a reserve of interest-bearing liquidity which is held by every sector of the economy, to a degree matched only by cash itself. In this respect, the public debt functions to enhance the mobility of loanable funds through the economy. The creation and maintenance of such a public debt may be a useful government function, much as is the creation and maintenance of a currency system.[28]

A miscellany of institutions not covered in this outline, because of the small role they play or because their investment operations are subsidiary to other activities, include, postal savings, investment funds, security brokers and dealers, commercial paper and discount houses, acceptance dealers, title guarantee companies, pawnbrokers, individual trustees, investment counsel organizations, labour unions, and foundations.

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[27] Ibid., p. 291.
[28] Ibid., p. 294.

CHAPTER III

THE ADEQUACY OF MONETARY TECHNIQUES

This chapter will discuss the existing techniques of monetary control in order to determine if they were able to control the money supply and the creation of credit in the United States economy after the establishment of the Federal Reserve System.

A. The Traditional Means of Monetary Control

Commercial banks can create money if reserves are made available to them, and the Federal Reserve is the only entity granted discretionary power to alter these reserves. Simply by adding to or extinguishing bank reserves, the Federal Reserve may be able to increase or decrease the demand deposits of the commercial banks (the major component of the money supply) by several times the amount added or extinguished.[1] Thus, the main function of the commercial banks' reserves is not to protect the deposits of the public but to enable the Federal Reserve to alter the volume of bank deposits. This ultimate capability for controlling the volume of commercial bank deposits allows the Federal Reserve to exert a powerful influence on the total supply of money and upon credit conditions in the economy.

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[1] Sometimes bank reserves are called "high-powered" dollars, because they are capable of causing a multiple expansion or contraction in the money supply.

The control of commercial bank reserves is achieved by utilizing three related and complementary methods. These weapons of monetary policy are: (a) open market operations, or the purchase and sale of government securities in the open market, (b) discount operations, which entail lending to commercial banks, and (c) changes in the legal reserve requirements; other less important instruments of monetary policy, used at times by the Federal Reserve, are (d) moral suasion, in the form of advice or special arrangements with the financial community, and (e) selective controls over installment sales, mortgages, and margin buying in the stock market.

1. Open Market Operations

The Banking Act of 1935, established the Federal Open Market Committee, thereby culminating a gradual development during the twenties and early thirties toward formalizing and centralizing the control over open market operations as their national significance became more widely appreciated. A more sensitive instrument of monetary control was wanted, one that would "make greater use of the latent potential of a fractional reserve banking system in resisting inflation and deflation and facilitating economic growth."[2]

The Federal Open Market Committee[3] is advised by a staff of economists drawn from the Federal Reserve System. Meetings are held in Washington at three-weekly intervals, or as required, to review the business and credit conditions of the nation. Several of the Presidents and officials of the regional banks are often invited to attend

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[2] Robert V. Roosa, Federal Reserve Operations in the Money and Government Securities Markets (New York: The Federal Reserve Bank of New York, 1956), p. 8.

[3] The composition of the Committee was given above, p. 10.

the meetings in order that decisions about open market policy are made only after a full and complete discussion of national and regional conditions and that these decisions are co-ordinated with other instruments of monetary policy.

The Federal Open Market Committee is responsible for deciding what changes will be made in the portfolio of Government securities held by the Federal Reserve. It devises a broad policy of open market operations upon which the Vice President of the Federal Reserve Bank of New York will act. Customarily, this executive is selected by the directors of the New York Bank and approved by the Federal Open Market Committee to be Manager of the System Open Market Account. The Manager is in charge of the full range of activities of the Account and reports directly to the Federal Open Market Committee concerning market developments and actual operations. Thus, the physical task of Open Market Operations falls upon the Manager of the System Open Market Account who has to decide on a day-to-day basis whether to sell, to buy, or not to interfere. The Federal Open Market Committee remains, however, as the primary policy-shaping body of the Federal Reserve System.[4] The Manager of the System Open Market Account effects purchases and sales of securities in accordance with the instructions issued by the Federal Open Market Committee in the name of the System Open Market Account. Each Federal Reserve Bank is then charged according to the ratio of its total assets to the total assets of all of the Federal Reserve Banks combined.[5]

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[4] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 76.

[5] Ibid., p. 77.

Introductory texts describe the effect of open market sales of Government securities in a sequence of events or stages. For example, first let us suppose that the Federal Open Market Committee instructs the Manager of the System Open Market Account to impose a restrictive monetary policy by selling securities in the open market. This action will result in a reduction of commercial bank reserves. The second stage occurs when the reduction in reserves of the banking system causes a multiple contraction in the money supply. Third, the contraction in the money supply causes money to become more expensive and less available. Fourth, as a result of credit being more expensive and less available, macro economic theory suggests that the level of private and public investment and consumption may be reduced.[6] Finally, the pressure of the restrictive credit policy on the level of investment spending and upon the availability of credit causes a reduction in the level of money income, prices and, if restriction is drastic enough, of employment.

The sequence of an open market purchase is the reverse of the above. Commercial banks acquire reserves from Federal Reserve purchases; these may then be used to support a multiple expansion of the money supply. It is interesting to note that the initiative toward expansion is held by the banks. Consequently, when commercial banks are fully loaned up the effect of open market purchases is less definite than the effect of open market sales.

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[6] Present experience would indicate that the availability of credit is more important than its cost. See, I. O. Scott Jr., "The Availability Doctrine: Development and Implications," Canadian Journal of Economics and Political Science, XXIII, No. 4 (November, 1957), 532-39.

Text book writers are correct when they write that the way to relax the general credit condition of the economy is to have the central bank buy securities and thereby increase bank reserves, or that tightening of credit conditions can be achieved by selling to absorb reserves. Few economists would disagree that a fractional reserve system provides flexibility, a quick response to changing needs, and the capacity for diversified growth that is essential if a monetary system is to be a propelling, rather than a retarding, force in the economy.[7] However, a great number of other factors also influence the reserve position of commercial banks. All too often the press, the public, and even academic writers will interpret an increase in the security holdings of the Federal Reserve to mean an easy money policy; and a reduction in the security holdings to indicate that reserves are being absorbed, and to conclude, that money is going to become tight. These observations need not necessarily be wrong, but they often are; the reason being found in the complexity of the money market and the many factors affecting bank reserves. Changes in bank reserves can result from changes in the size of the float or of the amount of currency in circulation, as well as from fluctuations in Treasury balances and in foreign balances at the Reserve Banks. In addition, changes in reserve requirements, policy changes, and other lesser factors all account for a release or absorption of credit from the Federal Reserve every day, whether or not the Open Market Committee takes any action on its own initiative. Thus, the Federal Reserve could conceivably achieve the degree of restrictive pressure desired merely by offsetting the cumulative pressure of other factors affecting bank

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[7]Roosa, Federal Reserve Operations in the Money and Government Securities Market, op. cit., pp. 100-101.

reserves. For example, in the last half of 1955, if the Federal Reserve had not offset the various other forces working to restrict bank reserves, a reduction of almost one and one-half billion dollars, or more than 7 per cent of the reserve base, would have occurred. "That would have been restriction with a vengeance, and scarcely consistent with the balancing role, resisting inflation while providing sufficient reserves to finance nonspeculative business needs, which the Federal Reserve was pursuing through this period."[8]

After considering the changes in Federal Reserve holdings and other factors affecting the level of bank reserves, R. V. Roosa came to the following conclusions regarding System Open Market Account purchases and sales. First, the primary purpose of open market operations is to alter the reserve position of commercial banks, but the direction of the move alone should not be taken as an indication of the credit policy being undertaken. Other factors affecting bank reserves must also be considered. Second, Federal Reserve policy could be neutral if the psychology of the market and the other conditions causing changes in bank reserves make specific action unnecessary.[9] Finally, because of the dynamic and spontaneous response of all the factors influencing the money market, it is impossible to determine, very far in advance, the amount of Federal Reserve action required. These conclusions arise, according to Roosa, because of the dual nature of the Federal Reserve's responsibilities --its defensive and its dynamic roles.

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[8] Ibid., p. 103. The statistics above are also drawn from this source.

[9] Neutral, in this instance means no change in Federal Reserve holdings of reserve deposits of the commercial banking system.

The defensive role relates to the avoidance of disturbances that could possibly interfere with the routine operations of the monetary system, whereas, the dynamic role refers to the promotion of economic growth and progress within a stable economic framework by means of the Federal Reserve control over the reserve base of the fractional reserve banking system. Open Market Operations represent a fusion of both responsibilities. In his pamphlet, Roosa states:

> The upper-most concern at the Trading Desk every day is that the prevailing degree of pressure intended by the Federal Open Market Committee's policy (the dynamic aspect of the System's responsibilities) shall emerge from the day's confusion as a dominating force. Yet the specific action taken, more often than not, is directed toward offsetting or cushioning the effect of some mechanical by-product of the physical flow of payments (a defensive operation).[10]

Since 1951, the Treasury and the Federal Reserve System have determined the "ground rules" to be followed by the Federal Open Market Committee in its operations. The primary rules were concerned with, (a) the effectuation of policy, (b) the period of Treasury financing, and (c) the Federal Reserve's operation in the short-term market.[11]

In the first case, the importance of maintaining a stable market with monetary policies designed to minimize the extent to which open market operations interfere with the free play of market forces, was recognized. However, the risk that a market fluctuation could become self-feeding and cause disorder was also present. Thus, the Federal Open Market Committee recognized its responsibility to interfere as little as

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[10] Roosa, Federal Reserve Operations in the Money and Government Securities Market, op. cit., p. 105. The italics and the terms "defensive" and "dynamic" are coined by Roosa and are not generally used within the Federal Reserve System.

[11] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., pp. 34-41.

possible but always to correct disorderly conditions should they occur.

Secondly, after the Federal Reserve accord, the Federal Reserve was no longer obliged to use its powers to support Treasury financing, but the fact that concurrent monetary action could affect the Treasury's success was widely recognized. "Consequently, the Federal Reserve came to pursue whenever feasible what is known as an "even keel" monetary policy immediately before, during, and immediately after Treasury financing operations."[12] The Chairman of the Board of Governors of the Federal Reserve System and the Secretary of the Treasury meet frequently to discuss monetary policy in an attempt to maintain an "even-keel," that is, to keep sudden changes in credit conditions from interfering with Treasury financing. There are occasions, however, when the need for specific action by the Federal Reserve, to correct the economy's monetary position, may interfere with the debt operation of the Treasury.

The third ground rule, confining the Federal Reserve to operations in the short-term securities market, was the subject of extensive debate. It was widely argued that the primary concern of the Federal Reserve was to manage the money supply and that this function could best be achieved, with a minimum of interference in the institutional investors market, by investing principally in shorter term maturities. The purchase and sale of treasury bills, it was argued, would immediately effect commercial banks' primary and secondary reserves. Then, as the banks in the system adapted their portfolios to the changed conditions, the effect of the Federal Reserve action would be transmitted

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[12] Ibid., p. 38.

to longer term maturities. However, in early 1961, as a result of international developments affecting the balance of payments of the United States, operations in the longer term maturities were authorized by the Federal Open Market Committee.[13]

2. Discount Operations

An advantage of membership in the Federal Reserve System is the privilege of borrowing from Federal Reserve banks. Such borrowing by a member bank is generally prompted by the need to avoid a deficiency in legal reserves. In order to build up its reserve base, to comply with the legal minimum for any reserve computation period, a member bank has various alternatives. It may (a) restrict its lending, (b) sell securities in the open market, (c) borrow from another commercial bank, or (d) borrow from a Federal Reserve bank. The latter method is commonly called discounting and can be achieved in two ways. A member bank may discount various short-term commercial, industrial, agricultural, or other business paper; or it may acquire an advance from a Federal Reserve bank by offering its own promissory note backed by suitable collateral. The advance has become the most regular form of discount operation, generally being secured by Government securities which have been deposited at the Federal Reserve bank for safekeeping.

Of the methods of rectifying a reserve shortage listed above, the first three do not add to the total reserve position of member banks in the system whereas discounting does. Thus, any member bank can create reserves by borrowing at the discount window, but practice indicates that a bank will attempt to extinguish those reserves as promptly as possible

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[13] Ibid., p. 35. Also see, Arthur Smithies, "The Commission on Money and Credit," Quarterly Journal of Economics, LXXV (November, 1961), 546.

to preserve its privilege for use again when unexpected reserve drains occur. Under normal conditions, the continuous use of the discounting privilege by a specific member bank is not considered to be correct. For that reason, restraints are imposed at the discount window in order to stop banks from borrowing on a quasi-permanent basis. The temporary nature of discounting is reinforced, therefore, by custom and by official control.

When a large number of banks are indebted to Federal Reserve Banks, this indebtedness tends to shift throughout the entire banking system. As one bank repays its loan, another suffers a reserve withdrawal and requires accommodation at the discount window. In this manner, a net transfer of reserves occurs among banks, causing the restrictive effect to spread. "Experience generally shows that tightness in the availability of credit to bank customers is related to a large volume of member bank discounts outstanding, and easy credit conditions to a small volume of borrowing from Reserve Banks."[14] R. V. Roosa is of the opinion that the discount window is never either wide open nor tightly closed.[15]

The cost to member banks of reserve funds obtained by borrowing from Federal Reserve banks is known as a discount rate. Each Federal Reserve bank has the privilege of determining a rate in conformity with their regional requirements, but the rate is subject to final review and determination by the Board of Governors. Recently, improved communication

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[14]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 46.

[15]R. V. Roosa, "Credit Policy at the Discount Window: Comment," Quarterly Journal of Economics, LXXIII (May, 1959), 333-37.

has tended to cause one uniform rate, generally known as "the discount rate," to be established.

Because the business and financial sectors consider the discount rate to be a pivotal rate in the credit market, a change is commonly interpreted as a signal of either tight money or easy money. Unfortunately, this interpretation may not be valid. A change in the discount rate may result merely from a technical adjustment; from a continuing movement in the same direction; or it may, in fact, represent a change in policy tending toward a restriction or a relaxation of credit.

3. Reserve Requirements

The most recent of the major techniques of monetary control adopted by the Federal Reserve System is the power to vary the reserve requirements of member banks. It was first granted by the Thomas Amendment to the Agricultural Adjustment Act of 1933 as an emergency power to be exercised only after Presidential approval. Then, by the Banking Act of 1935 it was made a permanent power not requiring Presidential approval. Thus, the Board of Governors may set the legal reserve requirement, within specified limits, for any group of banks.[16]

The authority to change reserve requirements is a powerful instrument of monetary control because a change affects the volume of legally required reserves, and therefore, the deposit creation multiplier for the banking system. If the reserve ratio is raised, an

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[16] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 51, and also, The Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, op. cit. p. 421. See also, Chapter II, p. 8. The Central Reserve City classification was abolished late in 1962 and member banks are now divided into two classes: (a) Reserve City Banks, and (b) Other Banks.

individual bank may increase its reserve base by liquidating securities, by borrowing from other banks, or by borrowing from a Federal Reserve bank. However, the entire banking system can find additional reserves only if they are obtained from open market operations or by borrowing at the discount window. A lowering of the reserve ratio, on the other hand, results in the banking system having excess liquidity with which additional loans and investments can be made.

In the case of an increase in the reserve ratio, the deposit creation multiplier will be reduced. Conversely, an increase in the multiplier results from a decrease in the reserve ratio. Because a small change in the ratio causes a relatively large change in total available reserves, this monetary tool is not normally useful on a temporary basis. Also, because of its powerful and blunt effect, and because it is somewhat clumsy, the Federal Reserve generally prefers not to use it unless open market operations seem to be ineffective in halting some undesirable trend, or unless the excess reserves in the banking system are so large and the number of individual banks, whose reserves then become deficient, so small that open market operations are relatively ineffective.

4. Other Means of Control

The financial powers of the Federal Reserve System can conveniently be divided into two related and overlapping categories. The first consists of those powers which enable the Federal Reserve to determine or alter the money supply--called for convenience, the tools of monetary policy. The most important of these have been discussed above. The second category of powers, which enables the Federal Reserve to affect the allocation of loans, or of deposits, or the structure of interest

rates, can conveniently be called the tools of specific credit policy.[17] These include control over uses of credit, presently limited to the setting of margin requirements on security purchases, but previously also applied to consumer installment credit and to real estate credit. These tools do not operate by influencing bank reserves, their impact is felt directly by the lenders and borrowers in the market. The restraint on the borrower, or potential borrower, is applied simply by prescribing the terms on which specific loans may be made, regardless of the reserve position of the commercial banks.

Specific tools of credit policy are generally employed in a supplemental role. They were developed because they could restrain credit in specific sectors at a time when general economic conditions made general monetary restraint undesirable. Thus, selective controls have the ability to reduce the demand for specific commodities, or credit, by the most direct method available to the monetary authority. For that reason they appear to be useful additions to the instruments of monetary control of the Federal Reserve System.

The Securities Exchange Act of 1934, delegated authority to the Board of Governors to control margin requirements on security loans. Since then, the Board has had the power to prescribe the maximum amount that a purchaser of securities may borrow against the securities held as collateral on his loan. Increasing the margin decreases the maximum amount which can be borrowed, and lowering the margin increases the amount which can be borrowed. The margin range has varied from 25 to

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[17] Friedman, op. cit., p. 25.

100 per cent. However, there have been few changes since 1934.

Power to regulate consumer credit, unlike control over margin requirements, has been granted in periods of emergency to the Board of Governors only through specific and temporary orders. The orders granted limited authority to regulate the minimum down payment necessary on certain commodities, and the maximum term of various classes of loans. Generally, only certain consumer durables, such as automobiles, are regulated, but the line of commodities to which selective controls could be applied is very large. Because all financial institutions and credit outlets must be licensed and regulated, these controls present a very difficult policing problem.

The selective control over credit extended to finance new residential construction was first applied in 1950 as a part of the anti-inflationary program initiated after the outbreak of the Korean War. However, with the Accord and the suspension of the Government bond support program, banks became less willing to make real estate loans and nonbank lenders became less willing to obtain funds for mortgage lending by selling their government securities. As a result, in 1952, this selective control was suspended.[18]

Moral suasion, although less important in the United States than in some other countries, still is an important factor in monetary control. It is used with, or with the threat of, direct action to induce the banking and financial community to lend more or less liberally and to modify their credit expansion tendencies.

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[18] Steiner, Shapiro and Solomon, op. cit., p. 330.

Another, less frequently discussed power of the Federal Reserve System, is the provision prohibiting the payment of interest on demand deposits and limiting the rate of interest payable on time deposits.[19] Initially, this legislation was welcomed by the commercial banks because it offered a governmentally enforced maximum price on a cost item of the banking business. However, the growth of financial intermediaries not subject to this maximum price has recently put commercial banks at a competitive disadvantage. According to Milton Friedman, one of the few valid arguments advanced by those who allege that banks are at a competitive disadvantage relative to financial intermediaries (because member banks are used as a vehicle for monetary policy) is the argument concerning the prohibition and restriction of interest payable by commercial banks on demand and time deposits, respectively. He states further, that being subject to this price fixing serves no discernable monetary purpose.

B. The Goals of Federal Reserve Monetary Policy

Having examined the various traditional means of monetary control and credit management used by the Federal Reserve System, a consi-

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[19] The Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, op. cit., p. 420. The time deposit interest rates effective January 1, 1962, are:

Savings deposits held for:	
1 year or more	4%
Less than 1 year	3½%
Postal savings deposits held for:	
1 year or more	4%
Less than 1 year	3½%
Other time deposits payable in:	
1 year or more	4%
6 months - 1 year	3½%
90 days - 6 months	2½%
Less than 90 days	1%

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deration of the goals or purposes for which these powers are intended seems appropriate. We shall find that the objectives of Federal Reserve policy have not been one, but many. Not only have the objectives themselves changed from time to time but, in addition, there have been variations in the relative importance attributed to each of them.

A brief sketch of some highlights of the American monetary experience, dealing with the major contractions and depressions, will illustrate the vicissitudes of monetary objectives. According to Milton Friedman, monetary factors played a critical role in each of the contractions prior to 1914, and also in the recessions and depressions which followed World War I.[20]

The next section will discuss the following periods. First, the unstable monetary situation prior to 1914 which culminated in the Federal Reserve Act. Second, the period from 1914 to World War II will be considered so that we may clearly see how the objectives, guides, and methods have changed since the Federal Reserve began operations. Third, an examination of the monetary policy from 1945 until the Accord will follow in an attempt to determine the purpose and function of the Federal Reserve during that period. A consideration of the currently accepted goals of the Federal Reserve monetary policy will conclude the section.

1. A Brief Monetary History of the United States

The most notable contractions prior to the Federal Reserve Act were: (a) 1837 to 1843, (b) 1873-79, (c) the mid-1890's, and (d) 1907-08.[21]

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[20] Friedman, op. cit., p. 10.

[21] Ibid. This section owes very much to Friedman's chapter entitled, "The Background of Monetary Policy," pp. 1-23.

The only depression on record in the United States of comparable severity and scope to the Great Depression of 1929-30 is that which occurred after the banking panic of 1837. It lasted until 1843, with only a brief recovery in 1837-39. Both of these depressions have similar features.[22] Both witnessed a large number of bank failures; both saw the money supply fall by about one third, and both suffered from erratic and often unsound government monetary policy.

The failure to renew the Federal Charter of the Second Bank of the United States, headed by Nicholas Biddle, was a major factor leading to the monetary panic of 1837. The contraction of credit by the Bank just prior to the termination of its Federal charter, and Biddle's failure in his attempt to support the world price of cotton at a time when the world was in a general depression also contributed to the monetary difficulties tending toward an ultimate collapse. These difficulties, accompanied by monetary uncertainty and the failure in 1839 of the Second Bank of the United States, compounded the depression and made it more severe than it need have been.

From 1862, when the greenback inflation forced the suspension of convertibility of greenbacks into gold, until 1879 and the resumption of gold payments, the United States was on an inconvertible paper standard. Government monetary policy during this period was aimed toward causing a fall in the domestic price level such that a return to gold payments at the pre-Civil War exchange rate could be achieved. The restrictive monetary measures employed were not sufficient to reduce the money supply, but they did halt any appreciable increase. This fact, coupled with

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[22] Ibid., p. 10.

rapid growth in the American economy, resulted in a halving of the previous peak price level, with most of the fall occurring during the economic contraction of 1873-79. It is interesting to note that although the severe monetary restriction resulted in sharp price declines it did not appear to halt economic growth.

Following the resumption of gold payments in 1879, the United States experienced a rapid boom and then a period of relative stability combined with rapid economic growth. However, as more countries went on the gold standard and as economic growth continued, the public agitation for a larger monetary base increased. Falling world prices, the growing lack of confidence in the maintenance of convertibility into gold, political uncertainty, and the near success of the advocates of a silver standard, all combined to produce recurrent "flights" from the dollar. These manifestations led to a banking panic in 1893 and to the subsequent suspension of convertibility of deposits into currency. The depressed period which followed was not corrected because of any specific government policy, but because of the simultaneous discovery of a new gold extraction process and of new gold mines, particularly in Alaska and in the Yukon. Thus, the price inflation sought by the "free-silver" forces, was finally accomplished.[23] However, it was achieved by an accidental inflow of gold into the world markets, not because silver was used as a monetary base.

The contraction of 1907-08 was also accompanied by a liquidity crisis and the suspension of convertibility of deposits into currency. But an unusual feature of the decline was that, unlike other contractions,

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[23] Ibid., p. 13.

government monetary policy, or controversy over what government policy should be, had little influence on the crisis. The banking panic of 1907, though relatively brief, was of unusual severity. It is especially important because it caused intensified public interest in banking reform and led to the appointment of the National Monetary Commission. The Commission submitted the results of its study to Congress, and, after several years of thorough consideration, legislation was enacted providing machinery by which varying demands for money and credit could be met. This legislation was the Federal Reserve Act, which became law on December 23, 1913.

The outlook of the founders who created the Federal Reserve System was strongly influenced by the recurring monetary panics of the National Banking era. As far as they were concerned, the primary problem was the recurring banking crises. These crises were induced by a general lack of confidence; a few notable bank failures caused a cumulative desire on the part of the public to increase their liquidity position by shifting from bank deposits to currency. Though a few banks could conceivably convert their assets into currency, it was inconceivable that the entire banking system could liquidate assets in a volume sufficient to meet the pressure for wholesale conversion of deposits into currency. This attempt at wholesale liquidation, unless halted at an early stage by an increase in bank reserves (i.e. an inflow of gold) would cause a drastic fall in the price of bank assets and render banks almost totally insolvent. Gold imports could increase the reserve base of the banking system, but this was slow and required a rather drastic incentive. On the other hand, a suspension of payments--halting the conversion of deposits into currency--did not require even a temporary

closing of many banks nor the cessation of their financial operations. The suspension could conceivably continue for months, payments being made either by deposits or currency--with currency at a premium over deposits.

The men who created the Federal Reserve System were convinced that the monetary system was the primary cause of periodic depressions, and that invariably these depressions appeared to be triggered by a period of financial stringency and crisis. It seemed that financial panics were becoming increasingly frequent and severe. Mechanical failures were causing break-downs and the money necessary to keep the economy in motion was not being provided. There was something wrong with a monetary system involving an inelastic supply of metallic and paper money which was supposed to serve as basic reserves for the commercial banking system and as circulating currency. The break-downs in the banking mechanism occurred sometimes because of a general shortage of currency, sometimes because of lags or actual defaults in cheque collection and clearance, and at other times because of sharp regional shifts in demand for currency and deposits. These occurrences were only a few of the various inflexible and perverse manifestations causing tremendous and occasionally undue pressure to be applied on the financial centers where the many independent banks kept their reserve deposits. It was to abolish these problems that the Federal Reserve Act was established. The original purpose, as expressed by the originators, was to provide an elastic currency, to provide facilities for discounting commercial paper, and to increase the level of banking supervision.

After World War I, the price inflation which was expected immediately after the War did not occur as soon as predicted. The Federal

Reserve, urged by the Treasury, maintained rediscount rates at their wartime level and, thus, the mechanism developed to create money for the government continued to operate even after the War. From early 1919 to 1920, prices rose by almost 25 per cent and the money supply increased by over 20 per cent. The rediscount policy was finally changed in late 1919, first at New York, from 4 to 4-3/4 per cent in November, then to 6 per cent at all banks in January, 1920; and finally, at New York, to 7 per cent in June, 1920.[24]

The Federal Reserve had had no previous experience upon which to familiarize itself with the lag effect of a change in policy, so there was a tendency to wait too long before applying restrictive pressure, and then to apply too much pressure; then, when this appeared to have no immediate effect in halting monetary expansion, to apply even further pressure. Rediscount rates were reduced slightly in May, 1921, but this was many months after the cyclical peak and only two months before the trough. As a result, prices collapsed by almost 50 per cent, and the money supply fell rapidly.[25]

The remainder of the 1920's produced relative economic stability. Prices were stable or declining in the United States causing gold to flow in and this, plus other factors, tended to contribute to the growing international difficulty in maintaining the gold standard and to lay the groundwork for the Great Depression of 1929-33.

The stock market crash in October, 1929, made the contraction more dramatic and severe, but according to Friedman, until October, 1930,

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[24] Ibid., p. 16.
[25] Ibid.

the depression was not unusual. Toward the end of 1930, however, even though the Federal Reserve was following an "easy-money" policy, a series of bank failures changed the tenor of the contraction. Up until that time, there had been no indication of a liquidity crisis, the prevention of which was the purpose of the Federal Reserve System. A loss of confidence occurred nonetheless, and recurrent bank panics swept the economy from then until 1933.

In an earlier era, a suspension of convertibility would have been induced by the banking system very early in the crisis as a therapeutic device. However, the Federal Reserve did not wish to suspend convertibility and thereby admit its mistake. Consequently, the economy was subjected to three years of deflation, during which time a large number of banks failed. For this reason, the suspension, when it came in the form of the Bank Holiday of 1933, was no longer therapeutic. The crisis had reached proportions such that otherwise sound banks had failed, and the banking system had lapsed into a state of passivity. From October, 1930 to July, 1931, approximately 1,400 banks suspended operations, yet the discount window of the Federal Reserve showed a decline, with less credit outstanding than at the end of 1928.[26] A slight revival began in 1931, but this was cut short when Britain went off the gold standard and the Federal Reserve took prompt and drastic action to prevent a gold outflow. The discount rate at New York rose from 1½ per cent on October 8, 1931, to 2½ per cent and then to 3½ per cent a week later. The gold drain was averted but from August, 1931, until January, 1932, 1,860 banks failed and commercial bank deposits dropped by 15 per

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[26] Ibid., p. 19.

cent.[27]

Another revival began in 1932, when the Federal Reserve undertook open market purchases of one billion dollars. However, it was too little and too late to be more than a pallative, and the incipient revival ended in further collapse and the Bank Holiday of 1933. Milton Friedman holds little doubt but that the Federal Reserve could have prevented the monetary collapse had the open market purchases been made in 1931. This failure was taken to indicate that the instruments of monetary policy were ineffective in stemming deflation, with many observing that a comparable collapse would not likely have occurred before the establishment of the Federal Reserve System.

The Federal Reserve entered a period of almost complete inactivity, both as a defense reaction to its failure to stem the contraction, and because economic opinion was placing greater emphasis upon the role of fiscal policy. At the same time, the banking system experienced an increased desire for liquidity, and banks began building up excess reserves. Bitter experience had taught that the minimum reserves required by law were not enough; the discount mechanism had proved inadequate for many banks, and therefore, emergency drains required excess reserves. True, the establishment, in 1933, of the Federal Deposit Insurance Corporation, rendered future bank panics all but impossible, and made the holding of excess reserves unnecessary, but deposit insurance was new and uncertain and commercial bankers preferred not to take a chance. Unfortunately, the officers of the Federal Reserve considered the excess reserves in the system to be surplus funds, passive accumulations caused

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[27] Ibid., p. 19.

by a shortage of acceptable investments and of loan demands. Thus, when the Banking Act of 1935 gave the Federal Reserve permanent power to vary bank reserve requirements, the power was almost immediately used and reserve requirements were doubled in three successive stages. The initial increase in 1936, reduced excess reserves by about $1.5 billion, and the second and third, in 1937, caused a further reduction of approximately $1.5 billion. The consequence of this $3 billion reduction in reserves was to cause the banking system to attempt to rebuild their excess reserve position and, thereby, to contract the money supply. Although the Federal Reserve did not intend their action to have any immediate effect other than to absorb excess reserves, it did have a severe deflationary impact, adding substantially to the severe contraction of 1937-38. The contraction would probably have occurred anyway, but the Federal Reserve's misjudgment doubtless contributed to the severity of the cycle.[28]

After World War II, the price level and the money supply followed the World War I example by continuing to rise for some time after the end of hostilities. The cause was not a constant discount rate as it was after World War I but, rather, the Federal Reserve guarantee to maintain a relatively fixed pattern of yields on government securities. This meant that the Federal Reserve had renounced its power over the money supply and the creation of credit in the economy. Until the outbreak of the Korean conflict, there was little real inflation not caused by pent-up consumer demand expressing itself when wartime price controls were removed.

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[28] Ibid., p. 20.

Experience had shown, that the public was willing to hold unusually large quantities of money and low yielding government securities. This willingness changed, however, when the recession of 1948-49 proved to be inconsequential and when the United States became involved in the war in Korea. A sharp change in expectations followed, reflecting itself in an equally sharp rise in prices and in the money supply which the Federal Reserve was unable to halt because of its self-induced impotency. This situation led to the Federal Reserve Accord in 1951 and to the eventual abandonment of government security support in 1953.

The United States has experienced generally rising prices but only three minor recessions since World War II (in 1948-49, 1953-54, and 1957-58) and only one inflationary price rise in 1950-51. Milton Friedman believes that this record ". . . partly reflects an increased awareness on the part of the Federal Reserve System of the importance of a steady growth in the stock of money and partly represents a basic institutional change--the effect of federal deposit insurance in rendering highly unlikely a banking collapse--but it is too early yet to be certain that this is the case."[29]

2. Currently Accepted Goals

When President Woodrow Wilson signed the Federal Reserve Act in December 23, 1913, the original intent was to give the country an elastic currency, provide a mechanism for discounting commercial paper, and to regulate and supervise the banking community more effectively. The Federal Reserve was to provide a wide range of operating functions (often called its defensive role), defending against various seasonal, regional, and a variety of other events which might cause a sudden stringency

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[29] Ibid., p. 22.

in the process of dispersing currency, clearing cheques, or controlling the movement of funds among different areas. From the outset, it became apparent that a more sensitive mechanism of monetary control was wanted, one which would work toward minimizing inflationary and deflationary movements and assist in creating economic conditions favourable to full employment and to continued long-run growth.

Although banking in the United States was fraught with political squabbles and economic catastrophies until the establishment of the Federal Reserve System (and even after its establishment), it soon became clear that the Federal Reserve was not adequately performing its central banking function. A central bank must do more than provide the functions noted above, i.e., provide an elastic currency, a cheque clearance system, and a rediscount mechanism; a central bank must also utilize the full potential of the fractional reserve banking system to foster a flow of credit and money that will achieve orderly and sustained economic growth and price stability.[30] Thus, the attitude toward central banking in the United States shifted from what R. V. Roosa calls a purely defensive concept to what he calls a dynamic concept of Federal Reserve responsibility.[31]

In summary, the currently accepted goals of the Federal Reserve System are first, to avoid mechanical disturbances that could interfere with the smooth functioning of the monetary system and second, to use

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[30] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 1.

[31] Roosa, Federal Reserve Operations in the Money and Government Securities Market, op. cit., pp. 8-9.

the various mechanisms of control over the reserve base of the commercial banking system to help promote long-run economic growth within a pattern of sustained stability.[32] In the words of the Board of Governors, "The function of the Federal Reserve System is to foster a flow of credit and money that will facilitate orderly economic growth and a stable dollar."[33]

C. The Control of the Money Supply

The brief monetary history of the United States, outlined in the previous section, concentrated on the monetary experience of major economic fluctuations. This section will use that historical sketch in attempting to determine the success of the Federal Reserve System in controlling the money supply. Discussion will proceed in three parts: first, the pre-depression era from 1914; second, the period of monetary disgrace after 1929; and finally, the experience after 1951.

1. Pre-depression

The increase in the price level and money supply during World War I requires little attention for our purpose; it was the natural concomitant of a wartime economy. The initial increase resulted from gold inflows, and then, after America entered the War, the subsequent increase resulted from deficit financing. After 1918, however, the inflationary increase was due partly to the Federal Reserve rediscount policy. This policy was not changed until 1919, when the Federal Reserve rediscount rates were raised faster than at any previous time before or since. This action had inevitable contributary effects on the 1920-21 contrac-

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[32] Ibid., p. 105.

[33] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 1.

tion, and indicated that the Federal Reserve was not familiar with the lag effect of a change in policy. In addition, the banking panic of 1931-33 was in part a direct result of monetary disturbances[34]--precisely the type of situation that the Federal Reserve was conceived to prevent.

Thus, the Federal Reserve permitted the inflation following World War I; contributed to the sharp contraction of 1920-21, and permitted and extended the banking panic of 1931-33. The poor record spoke for itself, and it was not surprising to find that dominant opinion held that the Federal Reserve was unable to control the money supply and the creation of credit in the economy.

2. The Revolution

Monetary experience during the thirties caused a change of opinion concerning the Federal Reserve System; failure to stem the depression of 1929-33, was taken as evidence that they could not have done so. Then in 1936, when the Federal Reserve doubled the required reserve ratio, contributing thereby to the 1937-38 contraction, confidence was shaken even further.

Before the events of the thirties, accepted economic doctrine considered the money supply to be a very important determinant of money income and of the price level.[35] After 1938, however, a revolution in economic doctrine occurred. "The view became widespread. . . that the stock of money is a purely passive concomitant of economic change and plays no independent part except as it may affect a limited range of

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[34] Friedman, op. cit., p. 23.

[35] Ibid., p. 1.

market interest rates, themselves of minor significance."[36] It did not matter that Federal legislation had given the Federal Reserve new weapons of control in the form of (a) authority to regulate the required reserve ratios of member banks, and (b) a centralized mechanism through which open market operations could be undertaken; the monetary control aspect of the Federal Reserve System continued to be regarded as generally ineffectual. Gradually, however, as the passage of time dimmed the heritage of fear associated with the use of the traditional weapons of monetary policy, as academic and banking opinion became more critical, and as the threat of inflation became more real, a rebirth of interest in monetary policy occurred.

3. The Counter-Revolution

The increase in price level and money supply during World War II was, as in World War I, the natural off-shoot of a wartime economy. After the War, however, the Federal Reserve policy of support in the government securities market ignored the potential inflationary consequences of their actions. Nevertheless, the "loose-cargo" and cost of public debt arguments were accepted and used to support the Treasury program for some time.

"As the years passed, the Federal Reserve System became increasingly restive under conditions such that its open market operations accentuated, first, the inflation of 1946-48, then the recession of 1949, and then the renewed inflation of 1950-51."[37] It was this latter inflation, combined with the inflationary impact of the Korean War, that led

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[36] Ibid.

[37] Schlessinger, op. cit., p. 605.

to the final abandonment of the bond support policy and to the Federal Reserve Accord of 1951.

The United States has experienced only two minor contractions, in 1953-54 and 1957-58, and no substantial price rises since the Federal Reserve System resumed its central banking role in 1951. "Except for the sharp price rise of 1950-51, our monetary experience since 1948 or so has been admirable by previous standards."[38]

The evidence of the years following World War II suggests that the monetary authority in the United States has become effective and can control the money supply if it so desires. However, an increasing weight of doubt is being cast upon the ability of the Federal Reserve System to control the creation of credit in the various sectors of the financial market. This doubt has arisen primarily because of the phenomenal growth of liquid assets and of specialized financial institutions since World War II. These factors and their relation to the effectiveness of monetary policy will be considered in the following chapters.

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[38] Friedman, op. cit., p. 22.

CHAPTER IV

STRUCTURAL CHANGES IN THE FINANCIAL MARKET

The phenomenal growth of highly liquid government securities during and immediately after World War II, their relative decline and replacement by liquid claims held by the public against financial institutions, and the relative decline of commercial banks in relation to financial intermediaries, have all been cited as potential or actual reasons for claiming that the traditional methods of monetary policy are becoming less effective. This chapter will discuss the various structural changes that have occurred in the financial sector of the American economy since World War II, in order to determine if these changes have in fact undermined the effectiveness of traditional monetary policy.

A. Changing Conditions Since World War II

The American economy has undergone great economic, social and institutional change since the establishment of the Federal Reserve System. It experienced the World War of 1914-18 and then a postwar depression. This was followed by a new era of prosperity, which culminated in the "Bull Market Boom" and the Stock Market Crash. The Great Depression and the miserable thirties followed, ending finally in another world war. After World War II, contrary to general expectation, there was only a very short reconversion period before the postwar boom set in. Except for the minor 1949 and 1957 recessions, this boom, stimulated by

the Korean crisis, has lasted for approximately 20 years.

Since the establishment of the Federal Reserve System there have been periods of unprecedented prosperity and of poverty, of peace and of war. The economy has become highly industrialized. Science and new technology, combined with a growing population and a vigorous entrepreneurial spirit, have resulted in a more than fourfold growth in gross national product, and a twofold increase in real product measured in constant dollars. There have been striking changes in labour markets, management methods, working conditions and methods of production generally. Shorter hours of work and increased disposable income have altered consumption habits. Rapid transportation, television, and numerous other new techniques and inventions have caused changes in the American way of life. As the world appears to have grown smaller, the United States has taken a more dominant role in leadership. She has become the world's strongest power, the international banker, and the stronghold of the free market mechanism. But the United States has also experienced what may conveniently be called "creeping socialism." The government has been compelled, by force of public opinion and by public need, to expand its scope of operations. Government expenditures, both at the federal and the state level, have grown relative to gross national product. Of particular interest to this paper is the increasingly influential role being played by the federal government in the financial sector of the economy. First, the government has become especially important because of the increase in the volume of tax revenue and of government expenditures, reflecting the tremendous defense expenditures and the increased importance attributed to fiscal policy. Second, the evolution of regulatory devices has required that the government under-

take the functions of lending and insuring intermediaries. Finally, because of the phenomenal growth of the public debt since World War II, the government has become a dominant member of the securities market, dealing in all maturities.

Americans no longer appear to concur with Thomas Jefferson: "That government governs best which governs least." In fifty years, government expenditures have risen from about $3 billion per year to more than $140 billion per year; from about one-twelfth of the national income in 1913 to more than one-quarter in the 1960's. However, the preponderance of public opinion in the United States still holds that the market mechanism is preferable to complete government regulation, since it enables persons to coordinate their economic activities without direct coercion. Most Americans recognize that the government has an important role to play, but they hesitate to give the government regulatory control over economic activities which could be directed by the free market mechanism.

The private financial sector has also undergone rapid growth and development. Empirical findings indicate that since 1900 various financial intermediaries, i.e. life insurance companies, and saving and loan associations, have grown faster than the rate of population growth or of real output. It is the especially rapid growth of financial intermediaries since World War II, which has prompted various economists to suggest that the efficiency of monetary policy has been weakened. Miller suggests that we must consider monetary policy as it applies to the new world of big business, big government and big debt.[1]

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[1]Ervin Miller, "Monetary Policy in a Changing World," Quarterly Journal of Economics, XLL (February, 1956), 23.

1. The Growth of Liquidity Since World War II

Short-run monetary policy is concerned with controlling bank reserves in an attempt to reduce fluctuations in business activity. Long-run monetary policy attempts to provide a monetary climate aimed at inducing a high and sustained rate of growth with price level stability, and so, the money supply should generally expand at a rate related to the growth potential of the economy. However, this does not mean that the rate of expansion of the supply of money must be proportional to the rate of growth of the economy. Other factors must also be considered--for example, the changes in the quantity of liquid assets.[2]

During World War II enormous quantities of liquid assets were accumulated in the United States. In addition, the money supply increased more rapidly than the gross national product measured in money terms. At the end of the war there was an excessive amount of liquidity which threatened to flood the commodity markets and drive prices in the economy to higher levels. The authorities feared that a severe inflation of the "demand pull" variety would occur with "too much money chasing too few goods." The removal of price controls after 1946 meant that the pent-up demand of consumers, made effective by the excess

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[2] Franco Modigliani, "Liquidity Preference and the Theory of Interest and Money," Econometrica, XII (January, 1944), 49-51.

In general, all assets, whether money, securities, or physical goods, have two properties in common, but shared in different degree. These properties are liquidity and risk. Thus:

1. An asset is defined as being liquid if the market is perfect, in which case an individual's decision to buy or sell does not affect the price of the asset to any appreciable degree. The asset would be classified as being illiquid in the opposite case.

2. An asset is defined as being riskless if the price at which it can be sold in the market is constant or nearly so, and in a converse manner, it is risky if it is subject to wide price fluctuations when sold.

liquidity in the economy, could express itself in increased expenditures. It is precisely this action by the public, that accounts in large part for both the boom and the inflationary pressure in the early postwar years.

From 1946 until 1951, the increase in money supply was relatively small (approximately $15 billion) but, because of the Government bond support program, interest rates remained very low. Unfortunately, although the increase in the money supply was relatively small, the Federal Reserve was unable to contain the growth of liquid assets, and these continued to expand rapidly after 1946. This expansion was caused mainly by the growth of near-money claims on financial intermediaries which lay outside the direct control of the Federal Reserve System.

In 1951, the Federal Reserve regained its monetary powers and a restrictive monetary policy was begun with the money supply increasing at approximately 2½ per cent per year.[3]

According to J. G. Gurley, the United States experienced a tremendous growth in liquidity during World War II. He shows that total liquid assets rose from $95.4 billion in 1939 to $258.8 billion in 1946.[4]

Since money has the property of being accepted as a means of exchange, it is the most liquid of all the assets. Securities clearly share with money this property of high liquidity, but they have two drawbacks. First, as indicated above, securities are not a medium of exchange, and second, securities tend to be more risky than money because their market price is not constant.

[3]This section owes much to the work of John G. Gurley, Liquidity and Financial Institutions in the Postwar Period, Study Paper No. 14, for the Joint Economic Committee, Congress of the United States, (Washington: United States Government Printing Office, 1960).

[4]Ibid., p. 5.

As might be expected, the increase in United States Savings Bonds was the most rapid, rising from $2 billion in 1939 to $44.2 billion in 1946. The money supply almost tripled during the same period, rising from $36.2 billion to $110 billion. Other close substitutes for money, including time deposits, savings and loan shares, mutual savings deposits, credit union shares, postal savings deposits, and policy reserves in life insurance companies, all nearly doubled.[5] Thus, the level of liquid assets was extremely high in 1946. According to Gurley, "the economy had almost $50 billion of liquid assets in excess of its requirements. . . ."[6] Nevertheless, the growth of liquidity continued into the postwar era, reaching $430.5 billion by 1958. However, the rate of increase after 1946 was lower. Thus, the liquidity ratio[7] fell from a high of 123 per cent in 1946 to 98 per cent in 1958. Gurley shows further that the total growth in the two periods considered (1939-46 and 1946-58) was about the same absolute amount, but that a change in the composition of liquid assets had occurred. There was only a small increase in United States Savings Bonds and in the money supply from 1946-58, but there was a 78 per cent increase in other assets. "Thus, liquidity expansion during the postwar years was predominantly in the form of growth of nonmonetary liquid claims on financial institutions."[8] He is of the opinion that the price inflation following

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[5] The policy reserves and the mutual savings deposits showed smaller gains.

[6] Gurley, op. cit., p. 4.

[7] The liquidity ratio is the ratio of liquid assets to Gross National Product in current prices.

[8] Gurley, op. cit., p. 5.

World War II would have been less severe had the volume of liquid assets been reduced or their growth held constant--preferably via a monetary reform. "In the absence of an initial monetary reform, however, and in the absence of direct controls over the total supply of liquid assets, the monetary authorities were greatly handicapped in their efforts to halt the growth of liquidity and so the rise in commodity prices."[9] Although a restrictive monetary policy had been imposed, the volume of liquid assets in the economy underwent a phenomenal growth, with most of the growth taking place in claims on financial intermediaries lying outside the control of the Federal Reserve System. It is argued that the existence of this large and widely held liquid debt acted as a lubricant which added greatly to the efficiency of the mobilization of credit in the economy[10] by providing a vehicle for the necessary transfer of funds between the ultimate borrowers and the ultimate lenders.[11] This spectacular growth of liquidity reflected the efficiency of the financial market in assembling "idle" funds and putting them to work in commerce and industry and accounts for the tremendous growth of financial intermediaries since the War.

2. The Growth of Financial Intermediaries Since World War II

The section on financial intermediaries in Chapter II described the various major categories of financial institution according to whether they fell within the broad category of savings institutions or

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[9] Ibid., p. 20.

[10] Smith, On the Effectiveness of Monetary Policy, op. cit., p. 596.

[11] Gurley, op. cit., p. 21.

borrowing institutions. Savings institutions generally tend to hold long-term securities, concentrating mainly on bonds and mortgages, whereas, borrowing institutions hold a diversified portfolio of assets, but concentrate mainly on short-term loans and equity stock. This can be demonstrated by referring to Table 1. We see that financial institutions held $494 billion in financial assets in 1957, out of a total amount of $1,256 billion.[12] Commercial banks and life insurance companies held the greatest amount of assets, with savings and loan associations and mutual savings banks following third and fourth in order of importance. Financial institutions, dominated by the commercial banking system, held 81 per cent of the corporate and foreign bonds, 78 per cent of the mortgages, and about 70 per cent of both consumer credit and other loans. Savings intermediaries held $97 billion in mortgages (about 62 per cent of the total holdings of mortgages) and $58 billion in corporate and foreign bonds (about 78 per cent of the total holdings of corporate and foreign bonds). Borrowing institutions held $14 billion in consumer credit (about 31 per cent of the total holdings of consumer credit), $8 billion in other loans (about 8 per cent of the total holdings of other loans), and $8 billion in corporate stock (about 3 per cent of the total holdings of corporate stock). These figures indicate that savings intermediaries held a dominant position in the market for mortgages and for corporate bonds. They also indicate that borrowing institutions, although of lesser importance, play an important role by providing consumer credit and by aiding equity financing.

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[12] Financial institutions held over $600 billion in financial assets in 1962, an increase from $20 billion in 1900.

TABLE 1

FINANCIAL ASSETS OF FINANCIAL INSTITUTIONS, DECEMBER, 1957[13]
(Billions of dollars)

Institution	United States securities	State and local securities	Corporate and foreign bonds
Federal Reserve banks	$ 24	. .	. .
Commercial banks	61	$ 14	$ 1
Mutual savings	8	1	3
Savings and loan associations, credit unions	4	. .	. .
Life insurance companies . .	7	2	42
Pension funds	2	. .	11
Other insurance companies . .	7	6	2
Other financial institutions	3	+	1
Total	$115	$ 23	$ 60
Nonfinancial holders	110	32	14
Total	$225	$ 55	$ 74
Percentage financial	51	42	81

Percentage of assets other than stock, cash and deposits. . 65

+Less than $0.5 billion

[a]Includes interbank deposits and reserves with Federal Reserve

[b]Chiefly held by mortgage companies

[c]Chiefly held by finance companies

[d]Includes security loans by brokers

[e]Chiefly held by investment companies

SOURCE: Federal Reserve mimeographed money-flow data. Figures are rounded and may not add up to totals. Stock excludes holdings of nonfinancial corporations, holding companies, and closed-end trusts. Federal debt excludes intragovernment holdings.

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[13] This table, in its entirety, is taken from, Trescott, op. cit., p. 295.

TABLE 1--Continued

Mortgages	Consumer credit	Other loans	Corporate stock	Cash and deposits	Total
. .	. .	. .	. .	+	$ 24
$ 23	$ 16	$ 57	. .	$ 35[a]	207
21	. .	. .	$ 1	1	35
40	3	1	. .	3	51
35	. .	4	3	1	95
+	. .	1	6	+	20
1	. .	. .	7	2	24
1[b]	14[c]	8[d]	8[e]	4	38
$122	$ 33	$ 71	$ 24	$ 46	$ 494
34	12	26	263	271	762
$156	$ 45	$ 97	$287	$317	$1,256
78	73	73	8	15	39

This relative growth in the size and importance of financial intermediaries has given rise to claims that monetary policy has become less effective in controlling the expansion of credit in the economy. These claims grew out of Goldsmith's empirical findings which indicate that financial intermediaries, since 1900, were growing in economic importance and that the commercial banking system had apparently suffered a relative decline.[14] The findings also indicate that structural changes were taking place. Commercial banks were specializing in consumer loans, term loans, and security investments rather than in short-term commercial loans. The findings also indicated that financial intermediaries were beginning to dominate the holdings of corporate bonds and of mortgages.

We see from Table 2 that all intermediaries within the broad classification of savings institutions did not show growth since 1900. For instance, mutual savings banks held 12.7 per cent and personal trust departments held 15.9 per cent of the assets of the private financial sector, respectively, in 1900, but since that time, their relative economic importance has decreased to 6.2 per cent and 9.3 per cent, respectively. However, the savings institutions as a group have increased their share of total assets of all private financial institutions from approximately 30 per cent to approximately 44 per cent, with savings and loan associations and life insurance companies experiencing the largest absolute percentage increases.[15]

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[14] See, Irwin Friend, "Goldsmith, Financial Intermediaries in the American Economy Since 1900," American Economic Review, XLVII (September, 1958), 699-704.

[15] The Commission on Money and Credit, Money and Credit (Englewood Cliffs, N. J.: Prentice Hall, 1961), p. 155.

Table 2

DISTRIBUTION OF ASSETS OF PRIVATE FINANCIAL INSTITUTIONS: 1900, 1929, 1945, and 1958[16]
(per cent)

	1900	1929	1945	1958
Commercial banks	52.9	41.8	56.5	39.5
Demand deposit business[a]	47.3	29.5	45.8	28.7
Savings and time deposit business[a]	5.6	12.3	10.7	10.8
Mutual savings banks	12.7	6.2	6.0	6.2
Savings and loan associations	2.6	4.7	3.1	9.1
Credit unions	. .	. .	0.1	0.7
Finance, mortgage, and loan companies	1.1	2.1	0.7	3.4
Life insurance companies	9.0	11.0	15.8	17.8
Other insurance companies	2.6	3.5	3.3	5.0
Private pension funds	. .	0.3	.8	4.1
Investment companies[b]	. .	4.7	1.3	3.3
Personal trust departments[c]	15.9	18.9	10.2	9.3
Security brokers and dealers	3.2	6.7	2.1	1.6
Total	100.0	100.0	100.0	100.0

Details may not add to totals because of rounding.

[a]Allocated in proportion of deposit liabilities.

[b]Includes investment holding companies.

[c]Includes common trust funds.

SOURCE: 1900 and 1929--Raymond W. Goldsmith, Financial Intermediaries in the American Economy since 1900, Princeton University Press for the National Bureau of Economic Research, 1958; 1945 and 1958--unpublished NBER figures.

[16]Ibid.

In summary, we observe from Tables 1 and 2 that financial institutions held 39 per cent of all the financial assets; that the nonfinancial sector held the largest quantity of corporate stocks and of cash and deposits; and, that savings institutions dominated the market for corporate bonds and for mortgages. "Thus we find a pattern in which the nonfinancial sectors of the economy hold large proportions of the ownership claims against business and the debt claims against financial institutions but only a small proportion of the debt claims against nonfinancial sectors."[17] A pattern has also formed in which the financial intermediaries hold large proportions of real estate mortgages, of government securities, and of corporate debt.

In Chapter III, the traditional controls of monetary policy available to the Federal Reserve System were discussed. There it was evident that the non-financial sector's internal financing was outside the control of the monetary authority. The Federal Reserve System can only influence the amount of external financing done, and this influence can only be expressed by controlling the supply of loanable funds coming from the commercial banking system.[18] In other words, the Federal Reserve attempts to influence aggregate spending in the economy by controlling one portion of the total supply of loanable funds. However, many observers feel that the impact of traditional monetary policy has been weakened by structural changes in the economy, and that the growth of financial intermediaries has been a significant factor since they lie

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[17] Trescott, op. cit., p. 296.

[18] The influence that the Federal Reserve System has over the interest rate also tends to influence the amount of internal financing in the economy.

outside the Federal Reserve's direct field of control. According to Gurley:

> In the absence of direct controls over the nominal supply of liquid assets, the monetary authorities were greatly handicapped in their efforts to halt the growth of liquidity and so the rise in commodity prices. Despite fairly severe restraint on monetary growth, there was a large expansion of nonmonetary liquid assets during the postwar period, which mainly took the form of increases in liquid claims on financial institutions lying outside of the direct controls of the monetary authorities.[19]

During the early postwar years the economy held a considerable amount of excess liquidity; consequently, the creation of debt and equity obligations remained comparatively low. However, when the economy had consumed its excess liquidity, then rapid growth of primary debt began. It is from this growth of nonfinancial primary debt and equity obligations that the financial intermediaries were able to expand by creating near-money and other liquid assets. In the period from 1947-58, approximately $400 billion in financial obligations were created in the economy and of this total, financial institutions purchased $187 billion. The commercial banking system purchased $73 billion and created $64 billion in liquid assets. While financial intermediaries purchased $114 billion and created $105 billion in liquid assets. Of the $169 billion in liquid assets which were created, approximately $140 billion were in nonmonetary liquid claims; the remaining $30 billion represents the increase in the money supply that occurred during the period. Therefore, the largest gains during this period were achieved by financial intermediaries which were not directly controlled by the Federal Reserve System. "It is apparent, therefore, that tight

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[19] Gurley, op. cit., p. 49.

control of the money supply was not sufficient to prevent substantial gains in nominal liquidity generally, though the liquidity problem was aggravated by rapid growth in time deposits, which the monetary authorities could have prevented."[20]

In his investigation, Gurley showed that the expansion of liquidity in the postwar economy was not achieved smoothly. He found that financial institutions in recession years (1949, 1954, 1958) and in recovery years (1947, 1950, 1955) experienced a higher rate of growth of liquidity relative to Gross National Product than was experienced during prosperity years (1948, 1951-53, 1956-57). He concluded that both the commercial banking system and financial intermediaries were stimulated by a low rate of growth of Gross National Product. However, during the period when the economy was dealing in private long-term securities, such as corporate bonds or real estate mortgages, financial intermediaries grew faster than the commercial banking system. The converse was true when Government securities, trade and consumer debt and bank loans dominated trade in the financial market.

By referring back to Table 2 it is evident that financial intermediaries have undergone amazing growth since 1900. Gurley shows that this growth has been especially pronounced since World War II, but that a change in the composition of the liquid assets in the economy has occurred. At the end of World War II liquidity was held predominantly in the form of Government securities, mainly in United States Savings Bonds. Since 1946, however, financial intermediaries have grown rapidly, relative to the commercial banking system. This change can be demonstrated

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[20] Ibid. The above statistics are also taken from this source.

by using Gurley's calculations which show that a 78 per cent increase in liquid assets of financial institutions, a 2 per cent increase in United States Savings Bonds, and a 19.9 per cent increase in the money supply, had occurred in the 1946-58 period. "Thus, liquidity expansion during the postwar years was predominantly in the form of growth of non-monetary liquid claims on financial institutions."[21]

3. The Relative Decline of Commercial Banking Since World War II

Table 2 also shows that the commercial banking system has suffered a considerable decline since the end of World War II. This is especially true if commercial bank growth is compared to the growth experienced by savings and loan associations. In 1945, commercial banks held 56.5 per cent of all the assets of private financial institutions; however, in 1958, it held only 39.5 per cent. All of the decline was suffered in the demand deposit business with assets falling from 45.8 per cent in 1945, to 28.7 per cent in 1958. The savings and time deposit business remained at about the same relative level, being 10.7 per cent in 1945, and 10.8 per cent in 1958. Regarding intermediaries, it is apparent that savings institutions have shown unusual growth, and that savings and loan associations especially have demonstrated a most impressive growth. In 1945, savings and loan associations held only 3.1 per cent of the assets of private financial institutions but, by 1958, their share had trebled to 9.1 per cent.

In general the professional and lay explanation for the postwar growth of intermediaries relative to the commercial banking system is based on a combination of a high interest rate differential and aggres-

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[21] Ibid., p. 5.

sive salesmanship. Because savings and loan associations have undergone the most phenomenal growth since World War II, the following discussion will place particular emphasis on that type of institution. However, most of the discussion will apply equally well to other savings institutions and to intermediaries in general.

According to two noted authors, the popular explanation for the decline in commercial bank savings in the postwar years is partly wrong, superficial, and incomplete.[22] First, the differential between the rate of interest offered by the commercial banking system and that offered by financial intermediaries, especially savings and loan associations, is discounted as a reason for the relative decline of commercial banks. This is because the difference between the interest paid on commercial bank deposits and that paid upon savings and loan association share accounts, actually grew smaller in the postwar era. Second, salesmanship was without a doubt one of the factors involved in the growth of financial intermediaries, but many other factors were also involved.

According to Alhadeff, the following factors were primarily responsible for the relative decline of commercial banking. First, the total number of savers in the economy increased, the new group of savers tending to accept risk more readily than those who could remember the Great Depression. Second, the savers' preference patterns were changed by the large volume of liquidity available after the War. This, combined with rising incomes and prosperity, increased the willingness of savers to accept risk. Third, the size of the average savings account increased

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[22]David A. Alhadeff and Charlotte P. Alhadeff, "The Struggle for Commercial Bank Savings," Quarterly Journal of Economics, LXXII (February, 1958), 5.

as incomes rose; as a consequence, some individuals shifted the placement of their savings funds.[23] Fourth, the construction boom in the postwar era and the need for real estate mortgages caused savers to turn to financial intermediaries for loans. This induced them to save there as well.[24] Lastly, the element of aggressive salesmanship re-inforced the effect of all the other factors. In 1954, savings and loan associations on average spent $0.97 per $1000 of share deposits, while commercial banks on average spent only $0.24 per $1000 of time deposits, on advertising media.[25]

Salesmanship has increased the financial intermediaries' share of the market, but to repeat, it is only one of the factors contributing to the relative decline of commercial banking. Primarily, it has assisted the saver in forming a subjective evaluation of the savings "package."[26] This may have altered his placement decision, but generally that decision depends on a combination of factors. It depends on the safety, liquidity, convenience, and the rate of return that the saver can expect to receive. In general, the first three are more influential than the rate of return. Alhadeff quotes a bank spokesman as saying, "our competitors hold only one trump card--rate of dividend--while we hold the rest of the entire deck."[27] This is probably the reason that the commercial banking system held 39.5 per cent of the assets of private financial institutions while other savings intermediaries

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[23] Ibid., p. 8.
[24] Ibid., p. 9.
[25] Ibid., p. 10.
[26] Ibid., p. 5.
[27] Ibid., p. 6.

(mutual savings banks, savings and loan associations, credit unions) held only 17 per cent in 1958.[28]

In summary, the relative decline of commercial banking since World War II was caused primarily by the increased number of savers, the increased average size of savings, and the strong postwar demand for housing. Fundamental to these changes were the growth in income, the growth in personal savings, and the high level of liquidity experienced at the end of the War. All these factors, combined with aggressive salesmanship, assisted in changing the savers' preference in favour of financial intermediaries.[29]

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[28] See Table 2, p. 62.

[29] Alhadeff and Alhadeff, op. cit., p. 21.

CHAPTER V

SOME IMPLICATIONS OF THE STRUCTURAL CHANGE

Previous chapters have described the mechanism by which the Federal Reserve System influences the flow of money and of bank credit; the composition of the credit market; the growth of liquidity; and, the decline of commercial banking relative to the rapid growth of financial intermediaries. This chapter will discuss some of the implications of these structural changes in the United States economy.

Because there has been a relative decline in the importance of commercial banks, and because the direct control of the Federal Reserve System is generally confined to commercial banks, doubts have arisen concerning the ability of traditional monetary policies to take adequate account of the complexity of the present financial sector. The prime objective of a restrictive monetary policy is to halt excessive effective demand. However, given such a policy, can the traditional instruments of monetary control prevent financial institutions from mobilizing funds in support of economic activity?

A. General Monetary Policy

We saw in Chapter III that the primary defensive function of the monetary authority was to avoid disturbances which might interfere with the smooth operation of the financial system, whereas the dynamic function was to utilize the various monetary techniques of control over the commercial banking system in order to promote long-run economic growth

within a pattern of stability.[1] According to the Board of Governors of the Federal Reserve System, "monetary policy attempts to provide a financial climate conducive to sustainable growth in output, employment, and consumption under conditions of relative price stability."[2]

The Federal Reserve may impose a specific monetary policy either by a passive or by a positive action. A passive policy could take the form of a failure to increase commercial bank reserves in the face of a rising demand for bank loans. But a positive policy directly affects the reserve base of the commercial banks by means of the various mechanisms of monetary control. For example, a restrictive policy could be imposed by open market sales of Treasury bills. The subsequent net reduction in reserves would have several causal results: the money supply would contract; the price of government securities would fall and the interest yields rise; the value, in money terms, of total assets would fall; the overall liquidity of financial portfolios would decrease; and, the banking system's ability and willingness to lend would be reduced.[3] Thus, a restrictive monetary policy has widespread effects in the economy. At first its impact is localized, but gradually by means of arbitrage and substitution, the restrictive effect is spread to other sectors of the financial market.

Thus, the Federal Reserve System, using the various instruments of control over the reserve base of the commercial banking system, can directly influence the quantity of money in the economy. In this manner,

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[1] See Chapter III, pp. 46-7.

[2] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 123.

[3] The Commission on Money and Credit, op. cit., p. 47.

the overall liquidity in the economy is altered, leading to changes in the availability and cost of credit. A restrictive policy reduces the money supply, tends to reduce the liquidity position in the economy and reduces the availability of credit while increasing its interest cost. This action, according to traditional monetary doctrine, retards the flow of expenditures and influences the levels of output, employment, and income. Logically, the reverse would tend to be true for a policy of monetary ease since it would encourage an expansion in these flows.

The following discussion will reconsider the manner in which the Federal Reserve System attempts to guide the economy by fostering an orderly flow of credit and money. To achieve this purpose, a current publication of the Board of Governors of the Federal Reserve System,[4] and the statements regarding monetary policy, contained in the Report of the Commission on Money and Credit,[5] will be used as the oracles of traditional monetary policy. Each publication discusses the impact of monetary policy as it affects bank lending and nonbank lending; the following discussion is similarly arranged.

1. Bank Lending

An active restrictive monetary policy results in the commercial banking system losing reserves. A bank in this situation, facing an increasing demand for loans, may obtain additional reserves by discounting; by drawing down balances or by obtaining loans from other banks; by selling Government or other securities; or, by letting maturing securities run off. But, each of these actions except discounting will affect

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[4]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit.

[5]The Commission on Money and Credit, op. cit.

other banks, and since discounting is a privilege generally only undertaken as an emergency measure, banks as a group cannot expand their total loans and investments in this way. However, if many banks begin selling securities, then the supply of securities in the market will increase, thereby causing lower prices and high yields on all such paper. This makes government and other short-term securities relatively more attractive. "In order to buy them, nonbank investors may use temporarily idle deposits or they may even be induced to economize on cash balances held for current payments."[6] This liquidation of securities by commercial banks softens the impact of monetary restraint on the system. "Nor is this wholly undesirable, because the sale of securities helps to spread the effect of monetary restriction from the banking system to other sectors."[7] If the ownership of idle balances is shifted to borrowers who are active spenders, then the velocity of the existing money supply will increase. "Total bank reserves and total bank credit and deposits do not increase in this process, but the volume of money transactions increases as the existing supply of money is used more actively."[8] Therefore, an immediate contraction may not appear when a restrictive policy is imposed, but as banks see their holdings of securities and secondary reserves declining, most of them will take measures to restrain the growth of their loan portfolios. More restrictive loan standards are

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[6]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 127.

[7]The Commission on Money and Credit, op. cit., p. 48.

[8]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 127.

adopted and the availability of credit is reduced. Because banks tend to discriminate,[9] the requests for loans from good deposit customers with which the bank has a continuing association will be filled first. The restrictive measures include stricter credit standards of worthiness, shorter maturities on term loans, and granting smaller loans than the amounts requested. Ultimately a new equilibrium position will be reached where all the banks have attained a position of profit, safety, and liquidity in accordance with their preferences under the new conditions. In this manner, according to the two authorities previously mentioned, the Federal Reserve can restrain bank credit.

W. L. Smith is of the opinion that restrictive action on the part of the Federal Reserve will affect banks in a slightly different way, but more important, he comes to a different conclusion regarding the ability of the monetary authority to restrict aggregate spending in the economy.[10] Briefly, Smith feels that when restraint is imposed certain events occur in the following sequence: first, the commercial banks will tighten their credit standards; second, they will sell their liquid secondary reserves causing a rise in the interest yield and a fall in the price of securities in the market; third, as the rate of interest in the market rises, so does the cost of loans; fourth, with the higher yield on loans, banks will meet the loan demands previously turned down.

Both views admit that the liquidation of assets in the market allows banks to obtain extra loanable funds in the face of restrictive monetary policy. The traditional view, however, holds that this action

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[9] Smith, "On the Effectiveness of Monetary Policy," op. cit., p. 593.

[10] Ibid., pp. 595-96.

cushions or softens the impact of monetary policy and that it actually is helpful since the banks' actions spread the restriction throughout the entire financial market. On the other hand, Smith feels that the asset transformation, which results in a more intensive use of the existing money supply, weakens the effectiveness of monetary policy. He argues that the weakness is considerably accentuated as a result of the rapid growth of financial intermediaries lying outside of the direct control of the Federal Reserve System, who are also able to circumvent monetary policy in times of credit restraint.

2. Nonbank Lenders

In Chapter II the various types of private financial intermediaries were divided into two main categories; savings institutions and borrowing institutions. This breakdown will also be employed in the following discussion.

According to the Board of Governors of the Federal Reserve System, many borrowing institutions will find funds less available and more expensive in periods of monetary restraint.[11] This, they argue, will cause these institutions to ration credit and to charge their customers higher rates on loans. However, borrowing intermediaries, as we saw in Chapter II, are able to obtain funds from several sources; thus, they will not likely be subject to an immediate rationing of credit. In addition, Paul Banner has shown that certain financial companies, offering a large quantity of consumer installment credit, are influenced more by merchandising requirements than by credit conditions in the financial

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[11] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 139.

sector of the economy.[12] He suggests further that consumer demand is highly inelastic in response to the interest rate charged on an installment loan. More emphasis is placed on the size of down payment and on the monthly payment required than on the interest charged.

Savings institutions reputedly suffer from rising interest rates induced by restrictive monetary policy because higher rates reduce the value of their existing asset portfolio. This, it is argued by the Board of Governors, causes a "freezing-in" effect, making savings intermediaries reluctant to liquidate assets in order to obtain funds with which to make loans. They also suggest that: "In a period when interest rates are rising and monetary policy is restrictive, an enlarged flow of financial savings out of current income and its investment in financial institutions helps correct forces making for inflationary tendencies."[13] This reduces loan demand pressure on commercial banks which if it had not been for credit restriction may have led to an expansion of bank credit and money.

Without doubt, lending by financial intermediaries will reduce the loan demand pressure on commercial banks, but the statement tends to contradict the idea that savings institutions, by fulfilling this demand for loans, are able to increase the velocity of circulation of the money supply and thereby use the existing supply more effectively.[14]

The views of the two authorities appear to conflict. The Com-

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[12] Banner, op. cit., pp. 241-58.

[13] The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 140.

[14] Smith, "On the Effectiveness of Monetary Policy," op. cit., p. 601.

mission on Money and Credit agrees with the Board of Governors that the increased flow of savings provides funds to other individuals and businesses who wish to increase their expenditures. But the Commission concludes that:

> Thus even though the money supply has not expanded, the mobilization of idle balances will finance more expenditures, and there will have been a partially offsetting rise in the velocity of money. It is frequently argued that this rise in the velocity of money resulting from monetary restraint frustrates monetary policy.[15]

However, the Commission is quick to side with the Board of Governors by adding a further statement:

> But this does not mean that a restrictive monetary policy does not have a restrictive influence on nonbank lending. It means only that to restrict lending by a given amount, the growth of the money supply must be more limited than if velocity did not rise. The increase in velocity need not negate the effectiveness of monetary policy.[16]

The Board of Governors also argue that financial intermediaries are subjected to a "freezing-in" effect, caused by rising interest rates induced by a restrictive monetary policy which reduces the value of their existing asset portfolios. The Board readily admits that commercial banks can liquidate assets[17] in order to obtain additional loanable funds, but it tends to disregard the possibility that financial intermediaries will also be able to liquidate assets, or at least to suggest that the intermediaries' action would constitute only a relatively unimportant quantity of funds.

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[15] The Commission on Money and Credit, op. cit., p. 49.

[16] Ibid.

[17] See the previous section for the Board of Governors' statement concerning the commercial banks' ability to liquidate assets, pp. 4-5.

The Commission admits that: "When the demand for credit is strong, most nonbank financial institutions may sell Treasury or other securities to supplement the inflow of new funds."[18] But they also tend to hedge the potential consequences of such an admission by suggesting that financial intermediaries have relatively small holdings of liquid assets, and that they are often unwilling to accept a capital loss on the sale of longer-term securities.

However, Gurley has shown that savings institutions do have large holdings of liquid assets, and that their holdings have been increasing rapidly relative to the commercial banking system since the War.[19] In addition, Smith has indicated that, during periods of strong inflationary pressure, little confidence should be placed in the "freezing-in" effect as a means of detering large institutional investors from shifting funds from government or other securities to private loans and investments.[20]

Although the monetary authorities state that "monetary restraint causes a reduction in the willingness and ability of nearly all institutional lenders to meet the expanding credit demand,"[21] it is apparent that considerable confusion exists concerning the ability of financial intermediaries to mobilize additional funds in times of credit restraint. Traditional theory tends to disregard or, at least, to hedge the problem of asset transformation, generally concluding that any small increase in

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[18] The Commission on Money and Credit, op. cit., p. 50.

[19] Gurley, op. cit., p. 49.

[20] Smith, "On the Effectiveness of Monetary Policy," op. cit., p. 56.

[21] The Commission on Money and Banking, op. cit., p. 50.

velocity which may occur can be dampened by more intensive credit restrictions.

B. The Question of Effectiveness

During the past three decades, monetary policy has been subjected to unending attack and defence.[22] Some people simply do not like monetary policy and for that reason a large emotional response has characterized the controversy. There has also been considerable disagreement concerning the goals or aims of monetary policy. However, the most devastating criticism--one that has been gaining support in recent years--is that monetary policy tends to be "inherently defective." "In particular, the view has been widely expressed that anti-inflationary monetary policy is unlikely to be successful because of offsetting movements in velocity, no matter how effective it may be in controlling the volume of bank reserves and the supply of money."[23]

The following discussion will consider the growth of the "effectiveness controversy," concentrating mainly on the current state of the debate.

1. The Source and Growth of the Controversy

The brief historical outline of the American monetary experience, contained in Chapter III, vividly demonstrated the considerable turmoil experienced in the United States both preceding and following the establishment of the Federal Reserve System. To a large degree, the entire monetary history of the United States is fraught with confusion and

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[22] Schlesinger, op. cit., p. 601.

[23] Lawrence S. Ritter, "Income Velocity and Anti-Inflationary Monetary Policy," American Economic Review, XLIX (March, 1959), 120.

disturbance.

(a) Pre-Accord.--We have already discussed how public interest in banking reform became very intense following the banking panic of 1907, and that this public interest led to the establishment of the National Monetary Commission and ultimately to the Federal Reserve Act of 1913. People were seeking relief from the monetary panics that were periodically sweeping the economy. Many felt that monetary policy, properly directed by the Federal Reserve System, would be a much needed pallative, although most recognize that it would not be a universal panacea. There was little doubt in the minds of the policymakers concerning the potential effectiveness of monetary policy. "From Wicksell to Keynes (of the Treatise) it was generally believed that monetary policy, by lowering interest rates and, concurrently, the supply price of capital goods, could induce investment demand sufficient to maintain the constancy of the price level or to stress a more modern consideration, sufficient to achieve the utilization of all factors of production."[24]

It was generally assumed that the investment demand schedule was interest elastic so that a corrective monetary policy would guarantee the absorption of full employment savings in the long run if not in the short run. However, the unfortunate occurrences of the 1930's transformed what has been referred to as the "Age of Faith," into the "Age of Despair."[25] As the Great Depression continued, monetary policy was dragged from its position of honour. Serious doubts concerning the ability of monetary policy to influence spending were raised, and people began searching for a more effective method of controlling the economy.

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[24]Schlesinger, op. cit., p. 602.

[25]Ibid.

Empirical investigation such as the Oxford studies and others, tended to indicate that investment demand was inelastic, i.e., that it was relatively insensitive to interest rate variations.[26] In addition, the idea of a liquidity trap proposed by Keynes who argued that a low interest rate was not much affected by monetary policy, tended to compound the difficulties. According to Schlesinger, the dominant opinion in the government and in academic circles, buttressed by such conceptions, held that monetary policy was ineffective.[27]

The critics of the time may have erred by generalizing from the conditions of an economy suffering under an unusually severe depression. Prices had collapsed by almost 50 per cent, numerous banks had suspended operations, and by 1933, the banking system had lapsed into a state of passivity. In addition, the business and private sectors of the economy were in a turmoil. "Plainly it would be unwise to regard monetary policy as generally ineffective on the basis either of the analysis or of the conditions of the thirties."[28] It is entirely possible that the sensitivity of investment to the rate of interest and the strength of liquidity preference may vary considerably with changes in the overall economic climate.

The onset of World War II gave rise to inflationary pressures which, during the War, resulted in the re-institution of active monetary policy. However, at the end of the War, "the heritage of control asso-

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[26] For an evaluation of these studies see: William H. White, "Interest Inelasticity of Investment Demand: The Case From Business Attitude Surveys Re-examined," American Economic Review, XLVI (September, 1956), 564-87.

[27] Schlesinger, op. cit., p. 603.

[28] Ibid., p. 604.

ciated with fear of the consequences of the use of the traditional weapons provoked by the enormously expanded public debt, reinforced the anti-monetary attitude of the thirties."[29]

Two basic arguments were put forward by the critics of the time: first, rising interest rates would have little effect on aggregate spending but would increase the cost of servicing the public debt and, second, rising interest rates would cause the public to panic and to jettison their holdings of government securities.[30] Consequently, a substantial body of academic opinion held that the Federal Reserve System should intervene to support the price of government securities. This opinion was widely held, even by some members of the Federal Reserve System itself. However, their fear was probably excessive, especially since the market for government securities is generally stable. When a holder of securities wishes to sell, he can generally find a private buyer and need not depend on the Federal Reserve System. Nevertheless, up to and even after the Accord in 1951, it was widely argued that monetary policies were ineffective and impotent as general credit controls.

(b) Post-Accord.--The American economy during the immediate post-Accord era was changing rapidly, prices were rising and the world was recovering from the devastation of World War II. In the United States, support of government securities by the Federal Reserve System, military expenditures caused by the war in Korea, the postwar investment boom, and the postwar pent-up demand for consumer goods backed by the liquid assets acquired during World War II, combined to produce rising prices,

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[29] Ibid.

[30] This is the controversial "loose-cargo" argument.

During this period, reserve banking techniques that had been developed during the twenties were revived and used in more or less the same manner to achieve a contracyclical credit and monetary policy.[31] However, fundamental changes had occurred in the economy and in the thinking of the financial community. More emphasis was being placed on the availability of credit than on its cost; on the lender as opposed to the borrower. The availability of credit was stressed while rising interest rates came to be considered as being merely symptomatic of the many forces at work during periods of monetary restraint.[32] According to Youngdahl, writing for the Federal Reserve System, "the old instruments and principles of reserve banking have again proved themselves in use to be effective and sound."[33] However, many economists were of a different opinion; many held grave doubts concerning the effectiveness of monetary policy. Earl Ralph, in reply to Mr. Youngdahl's article, detected a note of misplaced complacency in the use of the word <u>again</u>, and went on to ask precisely when the old instruments of control had shown striking success.[34] Others were also deeply concerned about the question of monetary efficiency, and it was into this atmosphere of renewed emphasis upon monetary policy that Gurley and Shaw presented their noteworthy article entitled, "Financial Aspects of Economic Develop-

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[31] Richard Youngdahl, "Monetary Policy in Recent Years," <u>American Economic Review Supplement</u>, XLV (May, 1955), 402-8.

[32] Schlesinger, <u>op. cit.</u>, p. 605.

[33] Youngdahl, <u>op. cit.</u>, p. 414.

[34] Earl R. Ralph, "Debt Management and Monetary Policy: Discussion," <u>American Economic Review</u>, XLV (May, 1955), 413.

ment."[35] This article was received with considerable enthusiasm in academic circles, and is generally acclaimed as being responsible for initiating the new criticism of monetary policy. One of the most vigorous exponents of this view is W. L. Smith, who states:

> It has been pointed out recently that traditional monetary theory does not take adequate account of the complexity of our present financial structure, including financial institutions other than commercial banks. The basic function of financial institutions is the mobilization of the financial resources of the economy in support of economic activity, and I suggest that when credit conditions are tightened and the creation of new money through the banking system is restricted, the financial machinery of the country automatically begins to work in such a way as to mobilize the existing supply of money more effectively, thus permitting it to do most of the work that would have been done by newly created money had credit conditions been easier. Moreover, the existence of a large and widely held public debt acts as a lubricant which adds greatly to the efficiency of this mobilization process by providing a vehicle for the necessary transfers of funds among economic units.[36]

2. The Argument

The above indictment is perhaps the most profound criticism of monetary policy yet devised and, as Schlesinger indicates, it is not at all dependent upon the peculiarities of a deep depression or upon the vagaries of wartime finance.[37] The indictment is particularly devastating because prior to this new charge, it was precisely as an anti-inflationary weapon that monetary policy was generally acknowledged to be most potent. In other words, the charge strikes at the ability of the Federal Reserve to carry out a restrictive anti-inflationary policy, the area of monetary policy previously held to be most effective.

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[35] Gurley and Shaw, op. cit., pp. 515-38.

[36] Smith, "On the Effectiveness of Monetary Policy," op. cit., p. 601.

[37] Schlesinger, op. cit., p. 607.

Since its conception, the "effectiveness argument" has undergone a many-faceted growth. Various authors have emphasized different aspects of the controversy with each trying to arrive at the primary causative factor. Gurley and Shaw,[38] W. L. Smith,[39] and others have suggested that the influence of general monetary policy has been weakened by the relative growth of financial institutions lying outside of the direct control of the Federal Reserve System. Gurley later emphasized the growth of liquidity in the postwar era as being responsible for the tremendous growth of financial intermediaries relative to the commercial banking system.[40] Alhadeff, on the other hand, concentrated primarily on the relative decline in the commercial banking system. But, in general, the protagonists have concluded that anti-inflationary policy is unlikely to be successful. They came to this conclusion primarily because of the offsetting movement in velocity which results when financial institutions liquidate financial assets in the face of monetary restriction. Consequently, no matter how effectively the conventional instruments of monetary policy, employed by the Federal Reserve System, can control the money supply, the protagonists argue that monetary restraint will be considerably weakened by the increase in velocity; that the existing money supply will be used more intensively, allowing aggregate spending to continue unabated.

Briefly, the argument can be stated as follows: The Federal Re-

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[38] Gurley and Shaw, op. cit.

[39] Smith, "On the Effectiveness of Monetary Policy," op. cit., pp. 588-606.

[40] Gurley, op. cit., pp. 1-57.

serve System controls the supply of money and of bank credit by means of the various instruments of monetary policy which directly influence the reserve position of the commercial banking system. When inflationary pressure and aggregate spending threaten to become excessive, the instruments of control are employed to reduce the reserve position of the commercial banking system. Current theory and practice tends to indicate that the commercial banks react to the restrictive policy; first, by rationing credit, then, after the restrictive monetary policy has caused interest rates in the market to rise, by charging higher rates on customer loans. If the commercial banking system were the only source from which credit could be obtained, then it would generally be conceded that traditional monetary policy was effective in controlling aggregate spending in the economy. However, because there are a wide variety of other financial institutions offering various types of credit, and because these institutions are not directly controlled by the Federal Reserve System, it is charged that the efficacy of restrictive monetary policy is seriously reduced.

Additional support for the "effectiveness argument" is gained from the existence of the large and widely-held public debt. The protagonists charge that the public debt acts as a lubricant and that the financial market acts as the mechanism whereby the various financial institutions can obtain additional loanable funds. By liquidating their holdings of government securities, the financial institutions are able to enlarge the total volume of credit in existence by increasing the velocity of circulation of the unexpanded or restricted money supply. They argue that it is this ability to increase the quantity of loans in the face of a tightened reserve position, that has undermined the effectiveness of conventional monetary policy.

The "effectiveness argument" differs from previous criticisms of monetary policy in three ways: first, various studies have tended to indicate that higher interest rates have little deterrent effect on aggregate expenditures in the economy. Surveys, like the Oxford Studies, have indicated that investment decisions tend to be interest-inelastic. Experience drawn from the consumer credit market would also suggest a high degree of insensitivity to interest rates charged. In addition, installment borrowers tend to be more concerned with the size of the down payment and with the monthly payments required in relation to their incomes, than they are with the carrying charges on the loan. Thus, changes in the interest rate are held to have little effect on the borrower's demand for credit. Second, the Keynsian concept of liquidity preference is now used in a manner different from that originally intended. Initially, the concept of the liquidity trap was used to explain why an expansionary monetary policy, encouraging an increase in the money supply, would have no effect in reducing the market rate of interest below a certain level. But the new approach uses the liquidity preference concept to show how increasing interest rates can call out additional idle speculative balances, making them available for transactions purposes and for business and consumer loans. Without these idle speculative balances, the asset transformation undertaken by financial institutions to obtain loanable funds, would not result in an increased quantity of credit. Third, thinking on the question of the public debt and its effect on monetary policy has changed considerably since World War II. Initially the public debt was viewed as a potential nemisis of the monetary authority. This argument, known as the "loose-cargo argument," held that variations in the market interest rates could result in a gen-

eral collapse of the financial market. Currently, however, the "loose-cargo argument" has been replaced by a concept which views the public debt as a lubricant. In this role, the public debt allows financial institutions to hold very liquid government securities, which can be sold on the market to obtain loanable funds if the financial institution so desires. This ability of financial institutions to increase the velocity of circulation of the money supply, even in the face of a restrictive monetary policy, has been the subject of most of the recent discussions relating to the "effectiveness argument." However, the argument as stated above requires some immediate qualifications.

1. If the assets sold by the financial institutions to obtain additional loanable funds are purchased by persons through reductions in current expenditures, then the asset transformation process has no inflationary impact. However, it is more likely, especially in the initial stages, that the sale of assets will activate previously idle balances.

2. Investment demand is probably more sensitive to changes in the interest rate than the protagonists wish to admit.[41] Consequently, a restrictive action by the Federal Reserve System likely has a substantial role in reducing aggregate expenditures.

3. Schlesinger suggests that the ability of the various financial institutions to increase the velocity of circulation of the money supply may only be a temporary condition.[42] He observes that the large holdings of government securities in the portfolios of the financial institutions have declined relative to their holdings of other private fi-

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[41] White, op. cit., p. 587.

[42] Schlesinger, op. cit., p. 607.

nancial assets since World War II. Thus, as the relative holdings of highly-liquid government debt diminishes, the ability to increase the velocity of circulation of the money supply should also diminish.

4. Schlesinger also suggests that the debt management policy of the Treasury could be altered to assist the Federal Reserve System by reducing the quantity of highly liquid, short-term securities issued.[43] It is with this type of financial asset that most of the initial asset transformations are undertaken, and it is felt that a further reduction of the quantity issued would further inhibit the financial community from holding them as a type of secondary reserves.

5. It may also be argued that the large and wide-held public debt assists the Federal Reserve System in its task of influencing the level of aggregate spending.[44] Furthermore, it may be argued that an increase in the velocity of circulation of the money supply is part of the mechanism of restraint, that it provides a desirable cushioning affect allowing the Federal Reserve to influence spending without closing it off entirely.

The diversified holdings of the public debt provide a type of "telegraph system," allowing the signals of the Federal Reserve System, i.e., an open market purchase or sale, to travel throughout the entire financial economy. These signals are constantly being transmitted by means of arbitrage and substitution throughout the financial community. "Without growth in government debt, conventional monetary policy is largely limited to variations of reserve requirements, rediscounting

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[43] Ibid.

[44] Ritter, op. cit., p. 126.

policy, and moral suasion, all of which are directly applied on commercal banks only."[45]

The following chapter will consider the questions raised in the literature of the controversy in an attempt to determine if traditional monetary policy can ensure sufficient control of bank and intermediary credit in the economy.

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[45] Aschheim, op. cit., p. 69.

CHAPTER VI

THE PRESENT STATE OF THE CONTROVERSY

According to the Board of Governors of the Federal Reserve System:

> An efficient monetary mechanism is indispensable to the steady development of the nation's resources and a rising standard of living. The function of the Federal Reserve System is to foster a flow of credit and money that will facilitate orderly economic growth and a stable dollar.[1]

Few economists would disagree with the function of the Federal Reserve System as stated above. However, the controversy discussed in this thesis (i.e. the "effectiveness argument") does question the ability of the Federal Reserve to carry out its monetary policy effectively--especially a restrictive, anti-inflationary policy. This chapter will attempt to determine whether the traditional techniques of monetary policy, i.e. open market operations, discount operations and changes in the legal reserve ratios, are sufficient to ensure control of commercial bank and financial intermediary credit in the economy.

Because the Federal Reserve System is directly able to influence the reserve position of the more than 6,000 member banks in the System and to directly and indirectly influence the entire credit market to some degree, the traditionalists maintain that monetary policy is effective. However, the fact that a large number of commercial banks are

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[1]The Board of Governors of the Federal Reserve System, Purposes and Functions, op. cit., p. 1.

not subject to the same direct control, and the fact that the public now holds a large volume of liquid claims against financial intermediaries, have both been cited as potential and actual sources of escape from the impact of a restrictive monetary policy. These charges will be considered in turn.

A. The Commercial Banking System

There are approximately 7,000 non-member commercial banks in the United States holding roughly a tenth of the national demand deposit total.[2] The existence of this large number of commercial banks outside the Federal Reserve System presents certain problems because: (1) the reserve requirements for non-member banks (established by the various states in which they are located) tend to be lower than the reserve requirements imposed on member banks, and (2) the various states offer greater freedom than the Federal Reserve System as to the type of asset that the bank is permitted to hold as reserves--e.g., many non-member banks are permitted to count balances deposited with other banks, and, in some states, specified amounts of federal, state and local government securities may also serve as reserves.[3] These two factors (i.e., the lower reserve requirements and the varied forms in which the reserves may be held) allegedly provide the non-member banks with a competitive advantage over member banks. This competitive advantage, it is argued, may tend to inhibit Federal Reserve action. For example, the monetary authorities may feel that a restrictive policy is unreasonably discriminatory against member banks and that it may provide a potential induce-

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[2]See above, pp. 7-8.

[3]The Commission on Money and Credit, op. cit., p. 77.

ment for member banks to withdraw from the System. This argument resolves itself, therefore, into a question of equity--into a question of assessing the influence that the competitive advantage has on the actions of the Federal Reserve System.

The major difference between the monetary reserves of member banks and non-member banks, is the form of the reserves, not the size. As J. W. Henderson observed, "Member bank reserves are mainly in the form of federal funds; non-member reserves are mainly in the form of domestic balances. As a result, the non-member banks have much lower absorption ratios."[4] It is argued that this differential in absorption ratios could conceivably cause credit control problems for the monetary authorities. Thus, if the public were to react to credit restraint by shifting from demand deposits in member banks to demand deposits in non-member commercial banks, more credit could conceivably be obtained from a given amount of federal funds. In this manner the existence of a large number of non-member commercial banks could create a definite problem for the Federal Reserve System. A given monetary policy would then have a smaller credit restriction effect and, as a result, a more aggressive monetary policy might be required. However, severe restriction could lead to a sharp contraction in member bank reserves and to a sharp decline in government security prices. This,

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[4]J. M. Henderson, "Monetary Reserves and Credit Control," American Economic Review, L (June, 1960), 352. The term federal funds may be defined as monies issued by the federal government, including deposits at Federal Reserve banks, vault cash, and currency. The federal funds absorption ratio is defined as the amount of federal funds which directly and indirectly support a one-dollar public holding of a financial liability. A non-member demand deposit absorbs less than half the amount of federal funds absorbed by a member bank demand deposit. See Henderson, pp. 349-59.

in turn, might ultimately lead to disorderly market conditions--a situation that the Federal Reserve has been pledged to avoid since 1953. The potency of the argument, therefore, depends upon the extent to which credit restraint influences the public to shift from member to non-member bank deposits, and the extent to which this shifting of deposits will cause the Federal Reserve System to strengthen its credit restriction.

B. Financial Intermediaries

Doubt is currently being raised concerning the monetary authorities' ability to control the non-bank financial sector of the economy. The phenomenal growth of liquid assets and of specialized financial intermediaries since World War II have been cited as potential and actual sources of escape from the impact of a restrictive monetary policy. The rapid growth of financial intermediaries as compared to commercial banks and the rapid increase in the public's holdings of non-monetary liquid assets have focused considerable attention on the question of the intermediaries' ability to affect a restrictive anti-inflationary policy. In effect, the ability of the Federal Reserve System to carry out a restrictive anti-inflationary policy is being questioned.

Various authors have emphasized different aspects of the question and as a result considerable confusion exists concerning the ability of financial institutions to mobilize funds in times of credit restraint.[5] The traditionalists tend to disregard, if possible, the problems posed by increases in the velocity of circulation of the money supply. Generally they conclude that any small increase in velocity can be dampened

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[5] See above, p. 85.

by more intensive credit restraint.[6] Those who allege that anti-inflationary monetary policy is unlikely to be successful arrive at that conclusion precisely because of this offsetting movement in velocity during periods of monetary restraint. They contend that no matter how effectively monetary policy controls the money supply, the impact of monetary restraint will be weakened by increases in velocity--i.e., the existing money supply will be used more intensively.[7] Thus, the velocity of circulation of the money supply has been the subject of most of the recent discussions relating to the "effectiveness argument." Basically, the problem results from the current availability of a wide variety of near-money liquid assets which affect aggregate spending in the economy through their influence on the velocity of circulation of the money supply.

When the Federal Reserve System undertakes a restrictive monetary policy, the reserve base of the commercial banking system is reduced. This causes the money supply to contract, the price of government securities to fall and interest yields to rise. The money value of total assets decreases and the liquidity of financial portfolios declines. Thus, the commercial banking system's willingness and ability to lend is reduced. The impact is localized to the banking system at first, but gradually the restrictive effect is spread throughout the entire economy.[8]

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[6] See above, pp. 78-9.

[7] See above, p. 85.

[8] See above, p. 71.

The increased interest yield, resulting from the credit restraint, may induce the holders of idle cash balances to shift to savings and loan shares, mutual savings bank deposits, or to some other form of interest-bearing liquid asset. Financial institutions, including the commercial banking system, may also react to the tight money policy. These financial institutions may sell liquid assets (especially government securities) on the market in order to obtain additional loanable funds. The funds so acquired allow the various financial institutions to meet the unfulfilled demand for loans that normally follows a reduction in the availability of credit. Thus, the large holding of liquid assets in the economy permits an increase in the velocity of circulation of the money supply. This fact is the core of the "effectiveness argument."

According to the "effectiveness argument," a restrictive monetary policy has two offsetting effects:

(a) The restrictive monetary policy causes a general rise in interest rates and this, it is alleged, will induce the holders of idle cash balances to switch from demand deposits in commercial banks to interest-bearing claims on financial intermediaries. This action will not greatly alter the reserve base of the commercial banking system since most financial intermediaries hold their loanable funds as demand deposits in commercial banks. The ownership of the demand deposits is merely transferred to the financial intermediary, and then, in turn, to active spenders. In this manner, the velocity of circulation of the existing money supply is increased. In addition, the differential in the absorption ratio of reserve funds between the commercial banking system and the financial intermediaries allows more credit to be obtained from each dollar of

reserves.[9] For example, a given shift from demand deposits in commercial banks to interest-bearing claims on financial institutions could result in a relatively small decrease in the size of the money supply, but, because financial intermediaries have smaller absorption ratios, a substantial increase in the quantity of credit outstanding could result.[10]

(b) A restrictive monetary policy may cause financial institutions to sell liquid assets such as Treasury bills in order to obtain additional loanable funds. In this case, the public debt acts as a lubricant and the financial market acts as a mechanism whereby the various financial institutions, including the commercial banking system, can obtain the desired funds. Consequently, "if the purchasers of these securities had used their previously held deposits less actively than the new holders, velocity would increase."[11]

However, the Commission on Money and Credit, representing the traditional view, suggests that the velocity effects attributed to the movement of funds from currency and demand deposits into claims on non-bank financial institutions does not appear to be great. They argue further, that the increase in the velocity of circulation of the money supply, due to the sale of liquid assets on the market, can readily be offset by more intensive credit restraint.[12] The traditional view contends, therefore, that neither asset transformation nor deposit shifting affects Federal Reserve credit restraint to any great extent. Even though money substitutes

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[9] Henderson, op. cit., p. 358.

[10] Ibid., p. 352.

[11] The Commission on Money and Credit, op. cit., p. 79.

[12] Ibid., p. 78.

do play a role in increasing the velocity of circulation of the money supply, the traditionalists contend that it is not an important role.[13]

C. Conclusion

(a) In general, the competitive advantage possessed by non-member commercial banks does not pose a large problem for the monetary authorities--the relative importance of these institutions, as measured by their holdings of demand deposits, is small. Consequently, the question of equity is not likely to inhibit Federal Reserve action to any great extent.

The potential credit control problems created by the differential in absorption ratios of member as compared to non-member commercial banks is more difficult to assess. Statistics indicating to what degree the public will increase its holdings of relatively low federal fund absorbing assets in times of credit restraint are required before any conclusive judgement can be made concerning this question. However, because of the relatively unimportant role of non-member commercial banks, the evidence is not likely to indicate any major interference with the impact of monetary policy on the entire commercial banking system. In addition, the argument merely presumes that a shift of deposits will take place when credit is restricted--yet no reason is given to explain why the public should shift from member to non-member bank deposits. Consequently, the fact that a large number of non-member banks are not subject to the same controls as member banks does not appear to weaken the impact of monetary policy on the commercial banking system as a whole. The Fed-

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[13] Ibid., p. 80.

eral Reserve System under normal situations can be assumed to have sufficient power to determine the volume of the reserve base of the entire commercial banking system, even though the non-member banks are not subject to all of the direct controls of monetary policy.[14] The experience of the years since 1951 tends to indicate that the Federal Reserve System is capable of controlling the commercial banking system if it so desires, and that non-member banks are not able to appreciably escape the impact of a restrictive monetary policy.[15]

(b) There is still considerable disagreement concerning the relative importance of the public's increased holding of liquid assets and whether this increased liquidity will be able to influence the trend of velocity in the future. The disagreement cannot be satisfactorily reconciled without additional empirical data. Before a satisfactory and complete evaluation of the "effectiveness argument" is possible, studies will have to be undertaken to determine such things as: (1) the velocity effects attributable to movements of funds out of currency and demand deposits and into interest-bearing claims on financial intermediaries, (2) the velocity effects attributable to the portfolio adjustments of private financial institutions, and (3) the effect of intensive credit restriction on business expectations and upon market conditions.

In summary, the following conclusions may be drawn:

(i) The fact that a large number of commercial banks are not subject to the same direct control as member banks in the Federal

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[14] See above, pp. 24-6. Member and non-member commercial banks are affected by open market operations in the same manner.

[15] See above, p. 50 and also p. 74.

Reserve System does not appear to affect appreciably the impact of monetary policy on the entire commercial banking system. There are various reasons for this: first, because the non-member banks' demand deposits are small relative to the holdings of the member banks; and second, because the competitive advantages allegedly held by the non-member banks do not noticeably affect the monetary policy of the Federal Reserve System. However, before a conclusive statement may be made, additional empirical evidence concerning the effect of the non-member banks' competitive advantage will be required.

(ii) The fact that the public now holds large volumes of liquid claims against financial institutions does provide some escape from the monetary policy of the Federal Reserve System through changes in the velocity of circulation of the money supply. At present (if the evidence since 1951 may be used as a guide), the Federal Reserve System appears to be able to achieve its objectives by employing the traditional techniques of monetary control. However, considerable confusion and disagreement exists concerning the velocity effect and, as a result, further empirical investigations will be required before a conclusive statement can be made.

Except for a few die-hards, the viewpoint of most economists has tended to coalesce. In general, the controversy between the critics who argue that monetary policy is effective and those who argue that monetary policy is not effective has been mellowed. Most traditionalists now take account of the structural changes which have occurred in the financial sector of the economy, and most will admit that these changes have tended

to reduce the effectiveness of the monetary policy.[16] Similarly, the extreme charges of those who argued that monetary policy was ineffective have to a large extent been allayed. There is not so much a case against monetary policy as there is a case for recognizing the limitations and defects of the current techniques of credit control.

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[16] Schlesinger, op. cit., p. 616.

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